

CA-IR-268

Please provide complete copies of the Company's most recently prepared long run business plan and financial forecast, indicating the most current available view of operating revenues, expenses, capital investment, cash flow and return on investment for as many future years as are projected in the normal course of business.

HECO Response:

HECO is providing, as Attachment 1, its most recently prepared Sources and Applications of Funds report, which includes forecast capital expenditures, internal sources and financing information, and generally reflects cash flow. As HECO has not yet publicly released this latest consolidated Sources and Applications of Funds report, it is providing this report subject to the terms of Amended Protective Order No. 23378 to mitigate the concerns of not publicly disclosing financial information elaborated below.

HECO is also providing, as Attachment 2, a copy of the *Energy Agreement among the State of Hawaii, Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs and the Hawaiian Electric Companies* ("HCEI Agreement"), executed on October 20, 2008. The HCEI Agreement, signed by the Governor of the State of Hawaii, the Department of Business, Economic Development and Tourism, the Consumer Advocate, and the HECO Companies, documents a course of action to make Hawaii energy independent, and recognizes the need to maintain HECO's financial health in order to achieve that objective. While not formally a long range business plan for HECO, the HCEI Agreement includes numerous programs, projects and initiatives that HECO has committed to implement. In addition to the HCEI Agreement, please refer to the response to CA-IR-28 which includes as Attachment 1 a copy of the Hawaiian Electric Companies' *Corporate Strategies & Goals* for 2008 through 2012, which the Company has provided subject to the terms of Amended Protective Order No. 23378.

As HECO stated in its response to CA-IR-454 in Docket No. 04-0113 (HECO's 2005 test year rate case), in general, HECO has provided the forecast information that the Commission's rules require. In accordance with the Commission's rules, HECO provides the Commission and the Consumer Advocate with five-year capital expenditures estimates each year (see HECO 2009 Capital Expenditures Budget report filed with the Commission on March 4, 2009, a copy of which is provided in Attachment 3). While the Company has prepared projected financial information for 2009 and beyond, such as operating revenues, operating expenses and income, the Company objects to providing such information on the grounds that the information contains privileged commercial and financial information that is non-public, confidential information and disclosure of such information could trigger requirements under the rules and guidelines of the Securities and Exchange Commission and/or the New York Stock Exchange that information that would be meaningful to an investor (such as earnings estimates) be released to all investors, if the information is disclosed beyond a limited number of "insiders". Forecasts of earnings and returns are the types of information that, if selectively but not publicly released, could violate such requirements.

In addition, HECO objects to providing such financial information for 2009 and future years, as provision of such information without explanations of how the financial parameters were derived (including the assumptions that were made to derive such information as well as the basis for such assumptions) would be meaningless and confusing, and preparation of such explanation for post-test year estimates would be unduly burdensome. If HECO is required to produce such internally generated documents at the time of rate cases, then the information will have to be generated in a fashion suitable for external publication, rather than in its present form

used for internal management purposes. This would be unduly burdensome as well as counterproductive.

Furthermore, HECO objects to providing the most current available view of operating revenues, even under the amended protective order, as they reflect the Company's assumptions regarding the timing and amount of rate relief for this rate case and the decoupling proceeding (Docket No. 2008-0274). Disclosure of this information even under protective order could negatively impact the Company's efforts to obtain its requested rate relief. However, the revenue forecast uses the same updated sales forecast that the Company provided in the HECO T-2 Rate Case Update and confirmed in the response to CA-IR-283 as the basis for the Company's 2009 operating budget.

Without waiving any of the objections stated above, operating expense information taken from HECO's 2009 operating budget and preliminary operating expense projections for 2010 are also being provided in Attachment 4, but provided subject to the terms of Amended Protective Order No. 23378 to mitigate the concerns of not publicly disclosing financial information elaborated above.

HECO does not prepare a forecast of return on investment (return on rate base).

Attachments 2-3 are voluminous and available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the documents. Electronic copies of the requested information are being provided.



Hawaiian Electric Company
Maui Electric Company
Hawaii Electric Light Company

Energy Agreement Among the State of Hawaii, Division of Consumer Advocacy of the Department of Commerce & Consumer Affairs, and Hawaiian Electric Companies

Summary of Key Agreements

Signatories: The Governor of the State of Hawaii; the State of Hawaii Department of Business, Economic Development and Tourism; the State of Hawaii Consumer Advocate; and the Hawaiian Electric companies.

All parties believe that the future of Hawaii requires that we move decisively and irreversibly away from imported fossil fuel for electricity and transportation and towards locally produced renewable energy and an ethic of energy efficiency.

Successfully developing Hawaii's energy economy will make the State a global model for achieving a sustainable, clean, flexible, and economically vibrant and independent energy future. Utilizing state-of-the-art technology, we can expand Hawaii's renewable energy portfolio and empower customers with more choices to manage their energy use.

We commit to being open and truthful with our community about the investment necessary to transition to a clean energy future, the importance of making it, and the time it will take to be successful. We accept that the transition to this clean energy future will require significant public and private investment with impacts on Hawaii's ratepayers and taxpayers, and we expect to achieve long-term benefits that outweigh the costs.

As we move from central-station, oil-based power to a much more renewable, distributed and intermittent-powered system, we recognize the need to assure that Hawaii preserves a stable electric grid and minimizes disruption to service quality and reliability. In addition, we recognize the need for a financially sound electric utility.

Finally, we commit to a system of regulation that will transform our major utility from a traditional sales-based company to an energy-services provider that retains its obligation to serve the public with reliable energy, strives to source and integrate greener and lower-cost generation, and moves us to a more independent future.

Renewable Energy Commitments

All parties commit to accelerate the addition of new, clean energy resources on all islands. With the parties support, Hawaiian Electric companies commit to pursue and integrate as much as an additional 1,000 MW of renewable energy resources on Oahu including approximately 400 MW of wind power from Lanai or Molokai; 60 MW on the Island of Hawaii (Big Island); and 50 MW on Maui. This includes the attached list of nearer term renewable energy commitments.

Hawaiian Electric will work to streamline power purchase agreements for these projects which must still be approved by the Public Utilities Commission.

Hawaiian Electric agrees the move to biofuels is not intended to slow the implementation of existing or future non-fuel renewable energy projects.

As Hawaii transitions to a renewable energy future, Hawaiian Electric utilities will retire existing less efficient fossil-fired units by removing such units from normal daily operating service as expeditiously as possible without compromising service reliability.

Renewable Portfolio Standard

All parties agree that a Renewable Portfolio Standard (RPS) is an effective structure for the Hawaiian Electric companies' obligation to add renewable energy. Therefore, the parties agree to seek legislative changes to the existing RPS as follows:

- RPS goals will be increased to 25% (from 20%) by 2020 and 40% by 2030. However, through 2015 no more than one-third of the companies' total RPS may come from imported biofuels used in utility-owned units. All grid-connected renewable energy generation, both central-station and distributed, shall count towards the RPS goal.
- Energy savings from energy efficiency, demand response, and renewable displacement shall NOT count toward RPS goals after 2014 but shall be fully counted toward achievement of HCEI goals.

'Big Wind'

Wind power is abundant on the Neighbor Islands with a combined potential across the State thought to be in excess of 1,000 MW, including only about 100 MW on Oahu.

The Hawaiian Electric companies commit to expeditiously integrate, with the assistance of the State, up to 400 MW of wind power into the Oahu electrical system from one or more wind farms on Lanai or Molokai and transmitted to Oahu via undersea cable systems. Therefore:

- Developers of Big Wind projects will be responsible for matters related to implementation of their wind farm facilities, including permitting, direct infrastructure and requirements to meet performance standards such as energy storage.
- The State, in coordination with developers, contractors, and/or Hawaiian Electric, will be responsible for siting and permitting the undersea cable system. The State, with Hawaiian Electric and/or developers' reasonable assistance, shall seek federal

grant or loan assistance to pay for the undersea cable systems. If needed, additional funding for the cable system will be provided through a prudent combination of taxpayer and ratepayer funding.

- Hawaiian Electric will be responsible for funding, constructing, operating and maintaining all land-based connections and infrastructure up to the interconnection point with the State-owned undersea cable systems.

Decoupling revenues from sales

All parties agree that transition to Hawaii's clean energy future requires that the Hawaiian Electric utilities should no longer be compensated under a model which inherently encourages increased electricity usage. Decoupling is a regulatory mechanism that de-links the utilities' revenues and profits from electricity sales. This decoupling of revenues from sales will remove barriers for the utilities to pursue aggressive demand-response, load management and customer-owned or third-party owned renewable energy systems while giving the utilities an opportunity to achieve fair rates of return.

Therefore, subject to the approval of the Public Utilities Commission, revenues of the utility will be fully decoupled from sales beginning with the interim decision by the Commission in the 2009 Hawaiian Electric Company rate case (most likely in the summer of 2009). Thereafter, rates will be based upon a system using independent measures to track the cost of providing electric service, with careful monitoring to assure ratepayer funds are properly spent. This includes:

- The current cost of operating the utility deemed reasonable and approved by the Commission.
- Return on and return of ongoing capital investment.
- Changes in State or federal taxes.

The Commission may review the decoupling mechanism at any time and may unilaterally discontinue it upon determination that it is not operating in the interests of ratepayers. The Consumer Advocate or the utilities may also request a review of the impact of the decoupling mechanism.

Feed-in tariffs

All parties agree that feed-in tariffs will encourage development of renewable energy. A feed-in-tariff is set of standardized, published purchased power rates, including terms and conditions, which the utility will pay for each type of renewable energy resource based on project size fed to the grid. This provides developers with certainty of the amount of payment and how much renewable energy the utility will acquire. Therefore:

- All parties agree that feed-in tariffs should cover the renewable developer's cost of energy production plus a reasonable profit.
- All parties will request that the Commission adopt feed-in tariffs by July, 2009.

Net Energy Metering

All parties agree there should be no system-wide caps on net energy metering. Instead, all distributed generation (DG) interconnections should be limited on a per-circuit basis to no more than 15% of peak circuit demand.

New DG requests shall be processed and interconnected on a first-come, first-served basis unless the Commission specifies some other method.

NEM currently provides an interim method to encourage the installation of renewable energy generated from customer-sited systems by paying a credit at full retail value for excess electricity exported to the grid. All parties agree that NEM will be replaced with an appropriate feed-in tariff when Advanced Metering Infrastructure and time-of-use rates (see below) are available.

Energy Efficiency Portfolio Standard

All parties agree to support the development of an Energy Efficiency Portfolio Standard (EEPS) for the State of Hawaii. The parties also agree to support the achievement of the goals established in the EEPS.

Greening Transportation

To reach the ambitious goal of 70% clean, renewable energy for electricity and transportation by 2030, a significant shift is essential in the way we travel around Hawaii, and especially Oahu.

A key action is to aggressively support alternative fuel vehicles. The most promising alternative fuel today is electricity. Electrification of transportation can offer consumers a low-cost alternative to gasoline and decrease greenhouse gas emissions from transportation dramatically, while only slightly increasing emissions from the power sector.

All parties agree to encourage adoption of 'gas-optional' electric vehicles (hybrids, plug-in hybrids, pure electric vehicles) through a variety of incentives. And all agree to lead by example and help develop a market by becoming early adopters of electric vehicles for their fleets.

Lifeline Rates

All parties agree that the Hawaiian Electric companies and the Consumer Advocate shall investigate and submit to the Commission by April 2009 a proposal to establish "lifeline rates" designed to provide a rate cap for those on low or fixed incomes who are unable to pay the full cost of electricity.

'Pay as You Save' Solar Water Heating

All parties agree that by the end of 2008, the Hawaiian Electric companies will propose to the Commission a full "pay as you save" program with a goal of 2,500 annual installations, expanding the current pilot SolarSaver program. Under this program, a ratepayer (whether property owner or renter) can request a solar water heating system; the utility

will pay for the unit installed by a licensed solar contractor; and the investment will be repaid through shared savings on the ratepayer's bill. Once the cost of the unit is repaid, savings accrue entirely to the ratepayer.

Photovoltaic Host Program

All parties agree that the Hawaiian Electric companies shall, by March 2009, submit to the Commission a proposal for a "Photovoltaic (PV) Host Program."

Under this program, the Hawaiian Electric companies will contract to use customers' sites, either commercial or residential, to install PV systems. As consideration, a site owner may receive a rental payment and/or use a portion of the energy generated. The PV system may be owned by the utility, the site owner or a third party.

Such PV systems can be targeted toward customers, such as the Department of Education facilities and other State buildings and properties.

Advanced Metering Infrastructure

All parties agree that Hawaiian Electric will apply to the Commission by November 30, 2008, for immediate approval to begin installing, on a first-come, first-served basis, advanced meters for all customers who request them, and request expedited approval to fully implement interim time-of-use rates for those customers.

By December 31, 2008, Hawaiian Electric will file a full application to install advanced meters to remaining customers and the communication and meter data management systems to give customers greater control of their electricity use.

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Renewable Energy Commitments¹ :

Hawaiian Electric Company, Inc. (Oahu)

- RFP (Competitive Bid for Non-firm Renewable Energy) (100 MW)
- Wind (30 MW), North Shore
- Wind (400 MW) Molokai and/or Lanai
- Honua waste-to-energy (6 MW), Campbell Industrial Park (CIP)
- C&C waste-to-energy (21 MW)
- Sea Solar ocean thermal (25 to 100 MW), Kahe Point
- Lockheed Martin ocean thermal (10 MW), Kahe Point
- Simple cycle biofueled CT-1 (110 MW), CIP (under construction)
- Distributed Generation (DG) biofueled (8 MW), Honolulu International Airport
- DG biofueled (30 MW) various substations
- Simple cycle biofueled CT-2 (100 MW), CIP
- DG mixed renewables (100 MW), on military property
- Future RFP (Competitive Bid for Renewable Energy) Additional and Replacement Power (MW TBD)

Maui Electric Company, Ltd. (Maui County)

- Shell Wind (21 MW) Ulupalakua
- Lanai Renewable Resources solar (1.2 MW)
- Pulehu (6 MW) Biomass
- Oceanlinx wave energy demonstration (2.7 MW)
- Landfill Gas (2 MW)
- Kaheawa Wind Farm, phase two (21 MW) Ma'alaea
- HC&S biomass contract extension Puunene
- RFP (Competitive Bid for Firm Renewable Energy) additional and replacement Power (MW TBD)

Hawaii Electric Light Company, Inc. (Island of Hawaii)

- Up to 40 MW of firm generation resources, including current possibilities:
 - > Puna Geothermal Ventures additional (8 MW)
 - > Hamakua Biomass (25 MW) or Hu Honua Biomass (22 MW)
 - > Hawaii County waste-to-energy (4 MW)
- Up to 5 MW of variable/intermittent generation resources, including possibilities:
 - > Sopogy concentrating solar power (0.5 MW), Kailua-Kona
 - > Na Makani wind (4.5 MW) with pumped hydro for "firming" and "smoothing"

¹Specific near-term projects identified to date

**ENERGY AGREEMENT AMONG THE STATE OF HAWAII, DIVISION OF CONSUMER
ADVOCACY OF THE DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, AND
THE HAWAIIAN ELECTRIC COMPANIES**

The signatories to this agreement are the Governor of the State of Hawaii; the State Department of Business, Economic Development and Tourism; Hawaiian Electric Company, Hawaii Electric Light Company, Maui Electric Company ("Hawaiian Electric Companies"); and the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs.

On behalf of the people of Hawaii, we believe that the future of Hawaii requires that we move more decisively and irreversibly away from imported fossil fuel for electricity and transportation and towards indigenously produced renewable energy and an ethic of energy efficiency. The very future of our land, our economy and our quality of life is at risk if we do not make this move and we do so for the future of Hawaii and of the generations to come.

The islands of Hawaii have abundant natural resources, including wind, sunshine, ocean and geothermal sources for electricity generation, and land for energy crops that can be refined into biofuels to address electricity and transportation needs. Economic and culturally sensitive use of natural resources can achieve energy supply security and price stability for the people of Hawaii, as well as significant environmental and economic opportunities and benefits. Successfully developing Hawaii's energy economy will make the State a global model for achieving a sustainable, clean, flexible, and economically vibrant energy future.

We commit to being open and truthful with our community about the investment necessary to transition to a clean energy future, the importance of making it, and the time it will take to be successful. We accept that the transition to this clean energy future will require significant public and private investment with impacts on Hawaii's ratepayers and taxpayers and, we expect to achieve long-term benefits that outweigh the costs of such investments.

As we move from central-station, oil-based firm power to a much more renewable and distributed and intermittent powered system, we accept that the operating risks of the Hawaiian Electric Companies will increase which may potentially affect customers. Thus, we recognize the need to assure that Hawaii preserves a stable electric grid to minimize disruption to service quality and reliability. In addition, we recognize the need for a financially sound electric utility. Both are vital components for our achievement of an independent renewable energy future.

We commit to take steps to reduce the demand for electricity and increase the efficiency of energy that we do use both to reduce the costs to the public and to reduce the level of electrical generation. At the same time, we recognize that a system of utility regulation will be needed to assure that Hawaii preserves a stable electric grid and a financially sound electric utility as vital components of our renewable energy future.

We will strive to assure that this process to achieve the HCEI goals and objectives will be directed towards providing ratepayer benefits, including long term price stability, and ultimately lower cost than would be incurred using imported fossil fuels.

We also commit to incorporate new metrics for measurement and oversight systems that monitor our progress in reducing our use of imported fossil fuel, while increasing our efficiency and our use of renewable energy to meet Hawaii's electrical energy demand.

We commit ourselves to a system of utility regulation that will transform our major utility from a traditional sales-based company to an energy services provider that retains its obligation to serve our public with reliable energy, strives to source and integrate greener and lower cost generation, and moves us to an energy independent future.

And finally, we commit to working together in good faith, openness and in the spirit of cooperation and collaboration to achieve the objectives and goals set forth in this agreement.



Linda Lingle
Governor
State of Hawaii



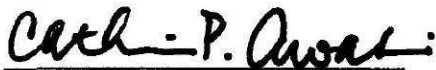
Constance H. Lau
Chairman of the Board
Hawaiian Electric Company, Inc.



Theodore E. Liu
Director
Department of Business Economic
Development and Tourism



Robert A. Alm
Executive Vice President
Hawaiian Electric Company, Inc.



Catherine P. Awakuni
Executive Director
Division of Consumer Advocacy
Department of Commerce and
Consumer Affairs

Witnessed By:



William Parks
U.S. Department of Energy



Maurice H. Kaya
Technical Director
Hawaii Renewable Energy Development
Venture

1 Wind Power for Hawaii

The Hawaiian Electric Companies are committed to integrating the maximum attainable amount of wind energy on their systems.

Furthermore, the Hawaiian Electric Companies are committed to prudently negotiate purchase power agreements and evaluate integration investment costs for the benefit of the Hawaiian Electric Companies' ratepayers.

To accelerate the addition of clean renewable energy resources for the residents of Oahu, Hawaiian Electric is negotiating Power Purchase Agreements ("PPA") with several independent power producers ("IPP") totaling up to approximately 135 MW of renewable energy (collectively the "Grandfathered Projects"), which includes a 30 MW wind farm located on the north shore of Oahu.

In addition to pursuing these Grandfathered Projects, Hawaiian Electric has also issued a Request for Proposals for Renewable Energy Projects ("RE RFP") seeking to contract for an additional 100 MW of renewable energy for Oahu. The RE RFP is part of a structured competitive procurement process established by the Commission ("Competitive Bidding Framework") with the intent to enable Hawaiian Electric to obtain viable renewable energy generation at a competitive and reasonable cost for the benefit of all ratepayers. Hawaiian Electric believes that much of the developable wind energy resources located on Oahu (understood to be in the range of approximately 100 MW) has the opportunity to be realized in the near term as a direct result of the Grandfathered Projects and the RE RFP activities.

Wind power is a commercially proven source of renewable energy today that, while limited on Oahu, is abundant on the neighbor islands with combined resource potential across the State thought to be in excess of 1,000 MW. To achieve substantially greater use of wind power on Oahu where most of the electric power in the State is consumed, it is necessary to transmit the wind power produced on the other islands by undersea cable systems¹ to Oahu. Several developers proposing large-scale wind farm projects located on the islands of Lanai and Molokai, ranging in size of up to roughly 400 MW each, have notified Hawaiian Electric of their intent to submit a proposal in response to the RE RFP.

In order to facilitate a future in which the abundant, sustainable and indigenous wind resources of our islands supply a significant portion of the total energy demand on Oahu, the parties commit to the following:

¹ Undersea cable systems are comprised of all facilities between the Oahu and the neighbor islands' AC transmission systems to transfer power between each island's grids.

1. Hawaiian Electric commits to integrate, with the assistance of the State to accelerate the commitment, up to 400 MW of wind power into the Oahu electrical system that is produced by one or more wind farms located on either the island of Lanai or Molokai and transmitted to Oahu via undersea cable systems (the "Big Wind" projects). This accelerated process shall in no way limit the longer term incorporation of additional neighbor island renewable energy projects should those future projects and cost of integration prove feasible and prudent to ratepayers.
2. Hawaiian Electric and the State commit to accelerate the addition of new clean renewable energy resources on Oahu. To that end, the parties recognize that the ongoing efforts related to the Grandfathered Projects and the Oahu RE RFP currently in progress provide the best near-term opportunity to add up to 235 MW of new clean renewable energy resources located on Oahu. Hawaiian Electric commits to continue negotiations for the purchase of renewable energy from Grandfathered Projects and to efficiently complete the Oahu RE RFP. The State commits to support, facilitate and help expedite these ongoing Oahu or Oahu related activities and processes, including the successful development of the resulting Oahu or Oahu related renewable energy projects.
3. To facilitate the early adoption of both the Oahu projects and one or more of the neighbor island wind farm, Hawaiian Electric, with support from the State, commits to work together with the developers of these Big Wind projects and the Commission to bifurcate their project proposals from the ongoing Oahu RE RFP. The bifurcated RFP process to evaluate and select the best Big Wind project or projects, will be led by Hawaiian Electric, with support from the State. Selection is contemplated to be conducted in conformance with the Competitive Bidding Framework using data submitted by developers in September 2008. The State will support Hawaiian Electric in the wind farm evaluation and selection process.
4. Hawaiian Electric also agrees to provide \$100,000 in funding to model the Molokai grid and to make efficiency recommendations to the island residents. (A similar program is already underway on Lanai through the Department of Energy.)
5. All necessary engineering, technical and financial studies and analyses to identify Big Wind project integration and performance requirements, undersea cable systems requirements, and Hawaiian Electric system modifications, infrastructure additions and operating solutions ("Implementation Studies") will be conducted in a comprehensive but expedited manner. (See "Technology of Inter-Island Renewables" section.)
6. The developer of the selected Big Wind project is responsible for all matters related to the implementation of its wind farm facilities. These responsibilities include: (a) securing all land rights, permits and approvals (e.g. environmental, land use and construction) that are necessary for the efficient and effective development of its wind farm; (b) all related infrastructure and equipment that may be identified and required for the project pursuant to the Implementation Studies, and (c) any requirements, such as energy storage to meet performance standards, that may arise from a subsequent interconnection requirements study ("IRS") conducted by Hawaiian Electric, and as embodied in a PPA between Hawaiian

Electric and the developers. The costs of fulfilling the aforementioned responsibilities shall be borne by the developer(s). Hawaiian Electric shall provide for appropriate additional storage capacity investments, grid upgrade additions, and grid operation management procedures to support the integration of the project with the overall grid.

7. Understanding the complexity of large scale infrastructure siting and investment in an Inter-Island Electric Cable, the State shall accept primary responsibility and shall serve as lead, while coordinating with developers, contractors, and/or Hawaiian Electric as the circumstances merit, on all matters related to the siting and permitting of the undersea cable systems consistent with the Implementation Studies. These responsibilities include but are not limited to conducting or having contractors and advisors conduct the appropriate engineering and design of the undersea cable systems, acquisition of all necessary off-shore and on-shore land rights, permits and approvals (including the Environmental Impact Statement), and construction, operation and maintenance of the undersea cable systems. The undersea cable systems shall be considered State owned infrastructure unless alternatives are discovered as part of the Implementation Studies and agreed to by relevant affected Parties. The State can also consider the option of bringing in a third-party independent transmission company to fund and build the inter-island cables.

Hawaiian Electric may enter into an agreement as a contractor with the State for the operation and maintenance of the undersea cable systems under such terms and conditions as the parties decide. Should Hawaiian Electric enter into any such operating and maintenance contract with the State, all reasonably incurred costs and expenses of Hawaiian Electric arising thereunder shall be recovered through the Clean Energy Infrastructure Surcharge (CEIS) mechanism.

8. The State shall first seek, with Hawaiian Electric's and/or developer(s) reasonable assistance, federal grant or loan assistance to pay for the undersea cable systems. In the event that effort fails, the State will employ its best effort to fund the undersea cable systems through a prudent combination of taxpayer paid sources and ratepayer sources with acceptance that the cable system finance may have an effect on Hawaiian Electric and that a financially sound electric utility are vital components of our renewable energy future. In the event Hawaiian Electric funds any part of the cost to develop the undersea cable systems such that Hawaiian Electric has part ownership in the cable systems, all reasonably incurred capital cost and expense of Hawaiian Electric arising thereunder shall be recovered through the CEIS mechanism. However, nothing in this paragraph shall be construed as creating an obligation on Hawaiian Electric's part to fund any part of the undersea cable systems costs.

9. The State and the selected wind farm developer shall work together, in consultation with Hawaiian Electric and other appropriate advisors and stakeholders as set forth in the conclusions of the Implementation Studies, to interconnect the undersea cable systems to the developer's wind farm facilities located on Lanai or Molokai. Hawaiian Electric will be responsible for all required utility system connections or interfaces on Lanai or Molokai, if any, with the State's undersea cable systems and/or the wind farm facilities. All necessary

Hawaiian Electric capital improvements will be proposed to the PUC for approval including its recovery supported by the State and the wind farm developer, and recovered, through the CEIS mechanism, until the next rate case, at which time such costs will be reflected in the test year rate base.

10. Hawaiian Electric is responsible for funding, constructing, operating and maintaining all land-based connections and infrastructure improvements to the existing Hawaiian Electric system up to the interconnection point located at the on-shore termination of the State owned undersea cable systems on Oahu. Hawaiian Electric will consult with, and seek agreement with the State on the selected route to the appropriate substation. The State will support, facilitate and expedite all required land use, environmental and regulatory permits and approvals associated with Hawaiian Electric's land-based connections and infrastructure improvements. In the event Hawaiian Electric is unable after reasonable effort to secure the necessary permits and approvals or is delayed in its completion of the required land-based connections and infrastructure on Oahu, Hawaiian Electric is not responsible for the cost, expense, and any purported lost opportunity of the Big Wind project developer and the State related to their efforts toward the development of this renewable energy undertaking. All necessary Hawaiian Electric capital improvements will be proposed to the PUC, supported by the State and wind farm developer, and recovered through the CEIS mechanism, until the next rate case, at which time such costs will be reflected in the test year rate base.

11. In addition to the integration of Grandfathered Projects and possible projects resulting from the RE RFP, and the commitment to integrate up to 400 MW of wind power in Hawaiian Electric's renewable energy commitments set forth in this agreement, an assessment will be conducted as a part of the Implementation Studies of the capability of the Oahu system to integrate additional wind energy from the neighbor islands in future years. Upon completion of the assessment and assuming it is possible, Hawaiian Electric agrees to integrate additional wind energy following the successful integration and commercial operation of the first large-scale wind farm. The Parties will review the process for the implementation of additional renewable energy and storage project opportunities from the neighbor islands and the Parties may agree to follow the same process identified in this section for the first neighbor island wind farm(s) to ensure that the proposal is in the best interest of the Parties and the ratepayers.

2 Renewable Energy Commitments

The parties are all committed to the rapid development of as much renewable energy as possible. To that end, the parties are looking to the development of a series of projects including, but not limited, to the listed projects.

Hawaiian Electric and the State commit to accelerate the addition of new clean energy resources on Oahu. To that end, the Parties recognize that Hawaiian Electric's independent, ongoing efforts related to the Grandfathered Projects and the Oahu RE RFP currently in

progress may provide a reasonable near-term opportunity to add up to 235 MWs of new clean energy resources located on Oahu. Hawaiian Electric commits to continue independent negotiations for the purchase of renewable energy from the Grandfathered Projects and to efficiently complete the Oahu RE RFP. Should these projects prove feasible and demonstrate rate payer benefits as shown in information made available to the State and in the State's sole opinion, the State commits to support, facilitate and help expedite these ongoing activities and processes, including the successful development of the resulting renewable energy projects.

It is understood that these projects must still be put before the Commission through PPA and that other new projects may come along as well. Hawaiian Electric will work to streamline PPA development for these projects in order to meet the commitment timeline set forth in Exhibit B of this agreement.

It is also understood that Hawaiian Electric's move to biofuels is not intended to slow the implementation of these or other renewable energy projects.

It is understood that the Hawaiian Electric utilities will not add any new utility owned biofuel central-station generating units without equivalent retirements in terms of megawatt-hour energy generation of existing units. The utilities will not be allowed any cost recovery for any new utility biofuel generation units without the aforementioned equivalent retirement of existing units.

It is also understood that the Hawaiian Electric utilities shall not themselves add any new fossil-based generation over 2 MW beyond those already approved by the Commission or under construction without equivalent megawatt-hour retirements.

The parties do note that specific renewable energy projects may or may not result in power purchase agreements for reasons outside the control of the parties negotiating such agreements.

Hawaiian Electric will encourage and explore the development of the following project proposals known today, with the goal of bringing the maximum number of projects and renewable MW on-line as quickly as possible subject to Commission approval, contract negotiations, and grid integration feasibility.

Hawaiian Electric Company, Inc.

- RFP (Competitive Bid for Non-firm Renewable Energy) (100 MW)
- NorthShore Wind (30 MW) as-available with batteries for smoothing
- Honua (6MW) Waste-to-Energy
- C&C (21 MW) Waste-to-Energy
- Sea Solar (25 MW to 100 MW) Ocean Thermal
- Lockheed Martin (10 MW) Ocean Thermal

- CIP CT-1 (110 MW) Biofuel Simple Cycle Gas Turbine
- Airport DG (8 MW) Biofuel
- DG at substations to Biofuel (30 MW)
- Molokai or Lanai Wind (400 MW)
- CIP CT-2 (100 MW) Biofuel
- Military DG (100 MW) Mixed renewables
- Waiau 3 and/or 4 Retirement (after CT-2 or Hawaiian Electric-Military DG on line)
- RFP (Competitive Bid for Renewable Energy) Additional and Replacement Power (MW TBD)

Maui Electric Company, Ltd.

- Shell Wind (21 MW) Wind
- Lanai Solar (1.2 MW) Solar
- Pulehu (6 MW) Biomass
- Oceanlinx (2.7 MW) Wave
- Landfill Gas (2 MW) Waste-to-Energy
- KWPII (21 MW) Wind
- HC&S extension Biomass
- RFP (Competitive Bid for Firm Renewable Energy) Additional and Replacement Power (MW TBD)

Hawaii Electric Light Company, Inc.

- Up to 40 MW of generation resources with full ancillary services, economic dispatch, energy payments only. Current possibilities are:
 - PGV Geothermal additional 8 MW
 - Hamakua Biomass (25 MW) or Hu Honua Biomass (22 MW)
 - Hi County Waste-to-Energy (4 MW)
- Up to 5 MW of variable/intermittent generation resources with energy only payments. Current possibilities are:
 - SOPOGY (0.5 MW) Solar
 - Na Makani (4.5 MW) Wind with pumped hydro for “firming” and “smoothing”

If the above happens, HELCO's fossil fuel generation will be displaced; depending upon how much of the above development occurs, the following may be possible:

- Reduction in energy purchases from Hamakua Energy Partners

- Reduction in energy production from HELCO fossil fuel units
- Shipman (15 MW) Retired (after Biomass and PGV on line and bio-fueling not feasible)
- Diesel-11 (2 MW) Retired
- Puna Steam (15 MW) converted to Biomass
- RFP (Competitive Bid for Firm and/or As-Available Renewables – due 2023) (MW TBD)

Energy storage, such as pumped storage hydro and battery energy storage as well as transmission and distribution facilities are considered as utility integrating technologies for generation resources. Energy storage and other technologies which provide ancillary services may be utility-owned or may be acquired with PPAs with appropriate prices, terms and conditions designed specifically for grid integration and ancillary services.

3 The Technology of Inter-Island Renewables

The Parties are all committed to the integration of non-fossil fuel, renewable energy, sourced first from the Renewables for Oahu Project(s). Over the long term, integration of renewable energy from neighbor islands may also occur should the results the Inter-Island Cable Study and additional Implementation Studies show that the resulting energy generation, delivery and grid integration costs provide true cost/benefit (in the face of imported oil and its associated price and supply risks) to the State and to Hawaiian Electric Companies' ratepayers.

In conjunction with the analyses to integrate the Renewables for Oahu Project(s), the Parties agree to assess the potential of an expanded undersea cable system to Maui County and to facilitate additional, near term, balanced, renewable energy resources based on the study results, where such results and additional potential projects are found to be cost effective and prudently incorporated in the near term without interference with the Renewables for Oahu Project(s). The Parties understand that the economies of scale and the timing of capacity utilization of any proposed undersea cable configuration may materially affect the overall benefit to ratepayers and will work to facilitate utilization of the cable or renewable resources, while maintaining system reliability in accordance with the rest of this section.

The parties agree to utilize an experienced technical resource, such as the National Laboratories to independently validate and review the appropriateness of the scope and depth of analyses envisioned for the Implementation Studies below.

To successfully accomplish the objective of integrating renewable energy from the neighboring islands, minimize curtailment of as-available energy, and extract the most value of a Big Wind project, subject to confirmation in the independent validation above, the parties agree to work together on a set of Implementation Studies to identify:

The technical requirements of and configuration for the inter-island undersea cable systems to ensure their high availability in order to facilitate the transfer of all available energy from the wind farm.

The modifications and additions needed for existing Oahu and neighbor island AC transmission grids to reliably interconnect power from the inter-island high-voltage DC cables and transmit the wind farm energy to Oahu's distribution system.

The energy storage or flexible generation (providing ancillary services and other attributes such as load following, frequency response, regulation, quick start, fast ramping, etc.) needed to offset the variable nature of the wind energy and to minimize the curtailment of wind or other intermittent energy projects.

The modifications needed on existing generating units (such as cycling conversion, etc.) to offset the variable nature of the wind energy and to minimize the "spilling" of wind.

The changes to operational practices and procedures needed to operate the island grids and integrate their operations with the wind farm.

The parties agree that the Oahu Implementation Studies will be based upon existing generation resources and transmission and distribution systems and will take into account projects identified in the Renewable Energy Commitments section above.

Using all available system, meteorological, and performance data of the island systems, the parties agree to conduct these Implementation Studies in a collaborative fashion to support a timely implementation of the neighbor island wind farm, the undersea cable systems, and the on-island transmission, generation, energy storage, and all other infrastructure necessary for the effective integration of the wind farm energy.

The parties agree that technical and operating requirements (including the design of the undersea cable systems, the modifications and additions to the Oahu transmission system, the amount of energy storage or flexible generation required, the kind of modifications needed to existing generating units, and the changes to operational practices) determined in the Implementation Studies should be based upon a robust infrastructure design that maintains reliability levels consistent with industry practices, customer expectations, and requirements of the PUC and strives to achieve a high fuel efficiency for the system.

The parties agree that these Implementation Studies involve the technical resources of the parties, and the technical assistance of leveraged resources such as the U.S. Department of Energy and its National Laboratories, the Hawaii Natural Energy Institute, and other appropriate technology advisors, both public and private, such as General Electric and other industry experts.

The parties agree to base the design and development of a neighbor island wind farm, the undersea cable systems, and the on-island transmission, generation, energy storage, and all

other infrastructure necessary for the effective integration of the wind farm, on the results of these Implementation Studies.

The parties agree to assess the ability of the Oahu, Maui, and Big Island grids to incorporate additional amounts of non-firm, variable renewable generation, such as significant amounts of distributed PV generation and a subsequent neighbor island wind farm.

The parties agree to analyze the expansion of the undersea cable system to the Island of Hawaii and to assess the potential of the expanded undersea cable to facilitate the development of additional renewable energy resources on the Island of Hawaii.

The intent of this effort is to identify the ability to utilize wind, solar, ocean, geothermal and other renewable resources to meet the electricity needs of the ratepayers of the Hawaiian Electric Companies. It is understood that actual build-out of the inter-island cables will probably happen in stages. Based on current knowledge the installation of the shallow cables from Maui County to Oahu are likely to happen first.

The parties agree that the cost of the Implementation Studies will be recovered through the CEIP surcharge.

The parties also agree to examine the impact that interconnection may have on revenue bond financing and to take appropriate follow up action. Appropriate follow up actions could include seeking changes to IRS regulations or the redemption of the revenue bonds and related capital structure costs.

4 The Solar Opportunity

Solar opportunities for Hawaii include solar water heating (SWH), photovoltaics (PV), and concentrated solar power (CSP).

The parties believe that solar energy represents an immediate and substantial renewable energy opportunity for Hawaii. In order to fully use that energy, the parties commit to the following:

1. A measure to address issues encompassed in the Governor's June 26, 2008 press release on her signing of the mandatory solar roofing law enacted in 2008 will be submitted to the 2008- 2009 Legislative session, and will be supported by all parties.
2. The tax credits and rebates for the conversion of existing homes to solar water heating will be continued. The Hawaiian Electric Companies may bid to continue implementation of this program once responsibility for energy efficiency programs is transferred to the third-party administrator.
3. The Hawaiian Electric Companies will propose a full "pay as you save" style program under which the ratepayer (property owner or renter) requests solar water heating, the utility

provides the unit installed by a licensed solar dealer, and the unit is paid for through a "shared savings" approach using the ratepayer's bill. The utility may outsource portions of the program administration. The utility will recover all prudently incurred costs related to this program. By the end of 2008, the Hawaiian Electric Companies will file an application with the PUC seeking approval to implement the program, with a goal of no less than 2,500 annual installations. Once the application is approved by the Commission, the Hawaiian Electric Companies shall be ready to implement the program. (This program is in addition to the ongoing solar water heating and pilot "pay as you save" programs that are currently authorized by the PUC.)

4. The Hawaiian Electric Utilities are responsible for expeditiously integrating customer-sited PV and CSP energy into the utility system via the Rule 14H tariff as modified in May, 2008. In addition, the Hawaiian Electric Companies shall incorporate the integration of PV systems in their Clean Energy Scenario Planning ("CESP").
5. The Hawaiian Electric Companies agree to address and mitigate the system integration issues at the distribution and system level for PV technologies.
6. Support the installation of third-party and customer PV systems through feed-in tariffs that offer known, stable pricing terms and standardized interconnections (See Feed-in Tariff section).
7. Support customer energy payment options through modification of Hawaii's Net Metering option to include provisions for the sale of excess energy produced by the customer's net metered system on an annual basis and payment for such energy at the feed-in tariff rate or at a somewhat lower fixed rate to fairly balance the option risks available in all customer options. New net metered installations shall be required to incorporate time-of-use metering equipment and, when time-of-use rates are implemented on a full scale basis in Hawaii or the applicable area, the net metered customer shall move to time of use net metering and sale of excess energy. The Parties agree that net metering installations benefit from system ancillary services, but that the long term commodity risks accepted by installation owners and excess energy payments contemplated herein, adequately compensate for the use of ancillary services that are unique to small island systems.
8. In order to provide customers a third option, the Hawaiian Electric Companies shall facilitate the development of photovoltaic (PV) energy by submitting an application to the PUC for a "PV Host Program" by March 31, 2009 of this agreement being signed. This PV Host program will consist of the following elements:
 - a. Contracting to use a customer site, both commercial and residential, for the installation of a PV system. The site owner may be a part owner of the system. As consideration for providing a PV generation site, the site owner may receive a site rental payment and/or use a portion of the PV energy generated at their site.
 - b. The Hawaiian Electric Companies will competitively procure the installation of the systems, which can be owned by a third party and/or the utility.

- c. In the case of third party-owned systems, the utility may purchase PV energy at a standard rate. That rate shall not be linked to avoided cost and is intended to provide long-term stable pricing. The initial rate shall be set based on a competitive solicitation done by the utility before the submission of the PV Host program application. The standard rate may be changed, subject to PUC approval, based on changes in tax laws and rebates, changes in PV system costs, and other developments in PV services.
- d. The Hawaiian Electric Companies may purchase the PV system and add the system cost to the utility's rate base, as long as the cost of the system is at or below the level established by the PUC.
- e. The Hawaiian Electric Companies shall structure the program to acquire PV energy as efficiently as possible, with priority given to sites, which accommodate large amounts of PV. Attributes of these sites as well as relevant information from known candidate sites will be identified in the program design and in the PV Host program application that will be filed with the PUC.
- f. Should federal legislation be altered so that the utilities may claim tax credits, the value of such tax credits shall be passed through to ratepayers in the form of lower rate based asset costs or other mechanism.
- g. In these PV Host installations, the Hawaiian Electric Companies are responsible for integrating the energy into the utility's system.
- h. Such PV Host systems can be targeted toward customers, such as the Department of Education facilities and other State buildings and properties.
- 9. Once the program is approved by the Commission, the cost of acquiring PV energy, including but not limited to site rental payments, site improvements, interconnection, purchased energy, and PV Host program administration shall be paid for by all ratepayers. The estimated program costs and cost recovery mechanism will be provided in the program design and application that will be filed for Commission approval.
- 10. Hawaiian Electric will review utility property such as Kahe Valley for use as a PV and/or CSP site by March 31, 2009, and the results of such review will be shared with the State and the Commission. Hawaiian Electric will also present the process in by which development may be implemented at each site.
- 11. The Hawaiian Electric Companies agree to facilitate the development of CSP through PPA.
- 12. The Hawaiian Electric Companies agree to address and mitigate the system integration issues at the distribution and system level for PV and CSP technologies through the Rule 14H tariff, as amended in May 2008.
- 13. All utility PV systems and projects shall be subject to the same circuit limits as all non-utility customer sited DG resources.

5 Biofueling

The majority of electric power generated in Hawaii is produced through the burning of imported liquid fossil fuels. Significant activity is taking place both in Hawaii and around the world to produce biofuels, which can be substituted for liquid fossil fuels.

The use of sustainable, renewable biofuels in existing firm power units (utility and non-utility) will provide substantial levels of renewable energy, reduce greenhouse gas emissions, avoid the need to construct expensive replacement generation, and allow for the integration of intermittent resources such as wind and solar energy.

The demand created by the use of biofuels in Hawaiian Electric's units will provide a strong basis for investment in the local biofuel industry, which, in turn, will bolster Hawaii's agriculture sector and increase our energy independence and security, and retain dollars in the State.

In order to facilitate the use of biofuels in Hawaii, the parties commit and agree to the following:

1. The Hawaiian Electric utilities will affirm the technical feasibility of biofuel (and/or blends of biofuels with fossil fuels) use in their generating units via operational test burns beginning in 2009. Such testing will include:
 - a. Procurement, transport, and storage of biofuels.
 - b. Design, procurement, and installation of new equipment and instrumentation.
 - c. State Department of Health approval of test burns. No individual test burn period shall be longer than three months, consistent with the Department of Health's administrative rules.
2. The State will support, facilitate and expedite all permitting and approvals associated with the Hawaiian Electric utilities' testing of biofuels in their generating units.
3. The State will provide the Hawaiian Electric utilities with maximum air permit flexibility during the test burns. If during testing, emissions approach permitted emission limits, the Hawaiian Electric utilities will terminate the tests. The Hawaiian Electric utilities may request temporary approval of higher emission limits to allow completion of the test burn. The State will facilitate and expedite the Department of Health's approval of temporary emission limits. In no case shall a violation of State or federal ambient air quality standards be allowed to occur.
4. The Hawaiian Electric utilities will competitively procure sustainable biofuels to be used for the tests, and request expedited PUC approval of the test biofuel procurement contract(s) and the inclusion of the test biofuel, sustainability audit, tracing, and certification costs, and transportation, terminaling, throughput and related costs in the energy cost adjustment clause. The parties agree on the Hawaiian Electric utilities' need to conduct biofuel tests and the appropriateness of including reasonable biofuel testing, audit, tracing, certification,

and transportation, terminaling, throughput and related costs in the energy cost adjustment clause or other appropriate surcharge mechanism that will allow for timely cost recovery. The parties agree to support utility recovery of all reasonable non-fuel related biofuel testing expenses that are not included in Hawaiian Electric's existing base rates.

5. The results of the tests will be shared with the parties.

6. Subsequent to testing, implementation of long-term biofuel use in the Hawaiian Electric utilities' power generating units may require air permit modifications and fuel infrastructure changes. The State and U.S. Department of Energy (DOE) will facilitate and expedite the State's Department of Health's and Federal Environmental Protection Agency's approval of such permit modifications, and advocate for maximum regulatory discretion including possible exemption from New Source Review. Hawaiian Electric will be allowed full cost recovery for all prudent and reasonable fuel infrastructure changes deemed necessary to support the implementation of long-term biofuel use, upon commission review and approval.

7. Assuming technical feasibility and the ability to modify permits are confirmed, the Hawaiian Electric utilities will implement use of sustainable biofuels (and/or blends of biofuels with fossil fuels) in their generating units, subject to acceptable biofuel pricing and sufficient biofuel availability. The Hawaiian Electric utilities will maintain flexibility in their equipment and permits and will be allowed to use alternative fuels should significant biofuel supply or price disruptions occur.

8. Hawaiian Electric will convert generating units using liquid fossil fuels to using biofuels, to the extent reasonable and necessary to achieve RPS goals and to facilitate integration of other forms of renewable energy.

9. The Hawaiian Electric utilities will procure sustainably-produced biofuels in accordance with its NRDC environmental sourcing policy. The parties agree in principle that paying a reasonable cost premium to ensure sustainability is acceptable.

10. The Hawaiian Electric utilities will preferentially purchase biofuels that are locally grown and produced in Hawaii. The parties agree in principle that paying a reasonable cost premium for locally-produced biofuels is acceptable.

11. The State, via its State Biofuels Master Plan, will identify and implement financial incentives and land use and employment policies to encourage the development of a local biocrop and biofuel production industry.

12. The Hawaiian Electric utilities will consider and pursue options to actively incent or partner in local biofuel development projects either as a regulated utility or as an unregulated affiliate. The State agrees to support the utilities' involvement in these projects subject to a showing of avoidance of conflicts of interest, and, if done as a regulated utility, reasonable ratepayer benefits.

13. The Hawaiian Electric utilities, as part of their ongoing research and development activity will provide financial support for research and development of locally-grown vegetable oils, research and development of algae and other next generation feedstocks, and local feedstock production and processing facilities. Currently, these activities are being conducted by the University of Hawaii and the Hawaii Agricultural Research Center.

14. The parties will support continued federal tax support for biofuels and will seek their extension to cover the full range of biofuel products including crude palm oil (CPO).

15. If there is a disruption of supply or delivery of biofuels or any technical or other similar biofuel related emergency situation, PUC approval must be sought by the utility before it can substitute fossil fuels for biofuels in operating new biofuel fired generating units beyond what is required for unit testing or startups/shutdowns.

6 Avoided Energy Cost Contracts

The parties regard avoided energy cost based on fossil fuel prices for renewable energy contracts as a vestige of the past. The Hawaiian Electric utilities will make a request of all existing independent power producers in which PPA are based on fossil fuel prices to renegotiate those contracts to delink their energy payment rates from oil costs and provide ratepayers with stable, long-term and predictably priced contracts. If such requests are not accepted, as opportunities arise, the Hawaiian Electric utilities will negotiate new contracts or extensions of existing contracts to delink their energy payment rates from oil costs. See Exhibit B for a list of existing PPA prices based on fossil fuel prices, and information on contract expiration dates.

All new renewable energy contracts are to be delinked from fossil fuel oil costs.

The utility will determine what ancillary services are needed to integrate proposed energy providers into the system and make appropriate investments to ensure grid reliability and performance. The utility will pay appropriate value for ancillary services provided by third parties.

7 Feed-in Tariffs

The parties agree that feed-in tariffs are beneficial for the development of renewable energy, as they provide predictability and certainty with respect to the future prices to be paid for renewable energy and how much of such energy the utility will acquire. The parties agree that feed-in tariffs should be designed to cover the renewable energy producer's costs of energy production plus some reasonable profit, and that the benefits to Hawaii from using a feed-in tariff to accelerate renewable energy development (from lowering oil imports, increasing energy security, and increasing both jobs and tax base for the state), exceed the

potential incremental rents paid to the renewable providers in the short term. To that end, the parties agree to the following:

- The parties will respectfully request that by March, 2009, the Commission will conclude an investigative proceeding to determine the best design for feed-in tariffs that support the Hawaii Clean Energy Initiative, considering such factors as categories of renewables, size or locational limits for projects qualifying for the feed-in tariff, how to manage and identify project development milestones relative to the queue of projects wishing to take the feed-in tariff terms, what annual limits should apply to the amount of renewables allowed to take the feed-in tariff terms, what factors to incorporate into the prices set for feed-in tariff payments, and the terms, conditions, and duration of the feed-in tariff that shall be offered to all qualifying renewable projects, and the continuing role of the Competitive Bidding Framework;
- In addition, the parties will respectfully request that by July, 2009, the Commission will adopt a set of feed-in tariffs and prices that implement the conclusions of the feed-in tariff investigation;
- Utility PPA of renewable energy made using the Commission-approved feed-in tariff shall be deemed to be prudent and their costs shall be approved for rate recovery;
- Utility purchases of renewable energy under the feed-in tariff shall be counted toward the utility's Renewable Portfolio Standard requirements;

The parties agree in principle that 10% of the utility's energy purchases under feed-in tariff PPA will be included in the utility's rate base through January 2015.

With the parties' agreement to implement feed-in tariffs as a method for accelerating the acquisition of renewable energy and Hawaiian Electric's implementation plan set forth in Exhibit B, towards the integration of the renewable energy commitments, the achievement of the utility renewable energy program goals, as well as the other commitments offered in this document as identified and summarized in Exhibit A, the parties further agree to request Commission suspension of the current intra-governmental wheeling docket (i.e., Docket No. 2007-0176) and the Schedule Q investigation (i.e., Docket No. 2008-0069) for a period of 12 months, with a goal of having parties review necessity of the docket.

8 Coal

The parties agree that new generators fueled, whole or in part, by coal are not in the best interests of the people of Hawaii. Any attempts to add new coal based generation in Hawaii will be opposed by the parties.

9 Renewable Portfolio Standard (RPS)

The parties agree that a Renewable Portfolio Standard is a desirable way to articulate and structure Hawaii's electric utilities' renewable energy acquisition obligations. To that end, the parties agree to the following:

- Energy savings from such technologies as energy efficiency, demand response, and renewable displacement shall not count toward the utilities' RPS goals after 2014, but shall be fully counted with respect to achievement of the goals of the Hawaii Clean Energy Initiative.
- In addition to a 10% RPS goal in 2010, a 15% RPS goal in 2015, and a 25% RPS goal in 2020, Hawaii's RPS goals shall be modified to require that 40% of the Hawaiian Electric utilities' total RPS must be provided from renewable sources by 2030, and that through 2015 no more than 30% of the Hawaiian Electric utilities' total RPS may come from imported biofuels consumed in utility-owned units.
- The Hawaiian Electric utilities will support the State and/or the PUC in incorporating these changes in the HRS §269-92, or in the exercise of the PUC authority. The parties understand that the PUC will impose penalties for non-compliance with the RPS.
- Electricity generation from refuse-derived fuels shall count toward the RPS because the energy produced by such generation is sustainable and avoids the social costs of landfill disposal.
- To the degree that liquid or solid fuels are burned in a mixture of renewable or sustainable and fossil fuels, only that portion which is renewable or sustainable (measured on a per BTU input basis) shall count toward the satisfaction of the RPS requirements.
- The Hawaiian Electric utilities may aggregate the renewable and sustainable generation and purchases across all islands in their service territory on a calendar year basis to meet their collective RPS requirements.
- All grid-connected renewable energy generation, both central-station and distributed, shall count towards the RPS goal.
- The RPS goals will be reevaluated every five years beginning in 2013 to determine whether they remain achievable, taking into account changes in technology, the status of the projects contemplated in this agreement, and necessary regulatory support. The reevaluation will also consider the status of biofuels and its ability to contribute to the RPS, as well as increase in sales for use in EV/PHEVs.
- If any renewable energy generated or purchased by the Utility on DOD installations, and feeding power to the grid, cannot be considered in the calculation of the utility contribution to the RPS, the RPS goals will be adjusted accordingly.

10 Greening Transportation

For the Hawaii Clean Energy Initiative to reach its ambitious goal of 70 percent clean, renewable energy for electricity and transportation by 2030, a significant shift in the way we

travel around Hawaii, and especially Oahu, is essential. While the State needs to pursue a broad range of solutions for transportation, the parties agree to the following:

Addressing transportation issues will require a combination of solutions including:

1. Increased mass transit (more buses and some kind of fixed guide-way);
2. More fuel-efficient internal combustion vehicles;
3. Alternative fuels for vehicles;
4. Improved personal mobility (e.g., walking and bicycling); and
5. Behavioral changes (tele-commuting, car pool and van pool use, etc).

The most promising alternative fuel, by far, available today is electricity. Electrification of transportation can offer consumers a lower-cost alternative to gasoline. It also decreases greenhouse gas emissions from the transportation sector dramatically, while only slightly increasing emissions from the power sector.

A variety of electric vehicles are in various stages of use and development.

1. Present hybrids use only gasoline for fuel but run much of the time on electricity generated by the vehicle;
2. Plug-in hybrids will charge from the grid and run most of the time on electricity, seamlessly converting to small gasoline-powered internal combustion engines only as the battery charge runs out; and
3. "Pure" electric vehicles will run exclusively on electricity, either from direct recharging or a combination of recharging and battery swapping to extend their range.

Whatever combination of technologies ultimately succeeds, moving from gasoline-fired engines to electric engines makes sense now. Electric utilities have significant idle capacity overnight that could be used to re-charge vehicles (and swappable batteries) during off peak hours. Increasing off-peak loads also can allow greater use of renewable energy during these off-peak times.

The impact of pure EV/PHEVs upon the utility grids will be carefully studied, and PHEV adoption strategies will be designed to complement and leverage the utility grids and will not be pushed beyond the point where they become potentially harmful or costly to the electric grid or uneconomic on a pure BTU-in, transportation miles-out basis.

Therefore, it is agreed that the parties will make 'greening' of ground transportation in Hawaii a priority.

Under this agreement, the State will:

- Encourage adoption of 'gas-optional' electric vehicles (hybrids, PHEVs, and EVs) through a "tool box" of incentives, including but not limited to

- Tax credits and/or deductions;
- Preferential parking and HOV lane use;
- Waived or reduced registration/license fees;
- Incentives/rebates for multi-family buildings to wire or re-wire for electric vehicle charging;
- Preferred insurance rates;
- Incentives for rental car fleet conversion to "gas optional" vehicles; and
- Support for:

Dealer offerings (preferred financing, discounts, rebates);

Utility offerings (preferred rates, rebates, new meters);

Employer support (stipends, vehicle-sharing, parking); and

Web-based information center.

- Assist utilities in making necessary changes (described below) to adapt to a transportation electricity market, including installation of a smart grid and potentially modifying the existing time-of-use rates to establish a rate that encourages the recharging of batteries during the off peak periods, thereby enabling the utility to reduce the amount of renewable energy that may be curtailed during such periods, and supporting greenhouse gas measures, which consider the overall decreased greenhouse gas impacts of converting from gasoline-powered vehicles to cleaner gas-optional vehicles (i.e., not penalizing the utility for possible increased electricity generation to help achieve cleaner transportation objectives).
- For pure EVs, conduct a study to assess whether the additional charging stations and other custom infrastructure needs dictate that one specific EV program (e.g., A Better Place) must be chosen over others (this does not preclude also supporting hybrid EVs and PHEVs).
- Work with all parties to develop charging stations in high traffic areas.
- Lead by example and help develop the 'gas optional' vehicle market by becoming an early adopter of electric vehicles for its fleets.

Similarly, it is the responsibility of the electric utilities to:

- Lead by example and help develop the 'gas optional' vehicle market by becoming an early adopter of electric vehicles for its fleets.
- Speed installation of Advanced Metering Infrastructure including the meters and computerized control technology.
- Adopt time-of-use rates to encourage off-peak recharging and the computerized technology to monitor and control such recharging.
- Encourage adoption of renewable energy as the primary source of recharging power.

11 Displacement of Fossil Fuel Energy and "Retirements"

As a key part of the transition of the Hawaiian Electric Companies' systems to a renewable energy future, the utilities will "retire" the older and less efficient fossil-fired firm capacity generating units by removing such units from normal daily operating service as expeditiously as possible. For purposes of this agreement retire means (1) to decommission and shutdown the unit; or (2) to place on "reserve standby status."

The utility generating units affected, the relative timing of such change in operating status, and the association of such operating status with the implementation of other envisioned projects is described in the Renewable Energy Commitments section of this agreement.

Re-permitting older generation will take years, and cannot be done fast enough to meet an urgent need. At the same time, the ratepayers have made a substantial investment in these units. Being able to bring units out of reserve standby status is expected to save ratepayers millions of dollars, the utility years of time to obtain approval to operate the unit and can avoid sustained outages resulting from unforeseen events.

A generating unit placed on reserve standby status will retain its current operating permits to provide for energy supply to customers as called for by the utility based on system needs. These units will be placed in cold storage and cannot be placed on the utilities daily commitment schedule except under emergency circumstances. When the unit is brought out of standby status, the utility shall notify the Commission, the Consumer Advocate, the Federal Environmental Protection Agency (EPA), and the State Department of Health (DOH). The utility's capital, operations and maintenance expenses related to placing and maintaining its units on standby status and to run the units under emergency conditions shall be subject to recovery through the rate process.

The utility with support of the parties will meet with the EPA and DOH to ensure that it is understood (1) that it is not intended that the reserve standby status is a permanent shutdown; (2) that the unit remains on State or federal emission inventories; (3) that the units will continue to be maintained; (4) that the unit can be brought back on line within six to eight weeks; and (5) that the unit's status will be reexamined as part of the Clean Energy Scenario Planning process and its annual updates.

12 Energy Efficiency

It is the goal of all parties to ensure that Hawaii achieves the maximum possible levels of energy efficiency as it represents the most effective use of resources possible, including conservation by not using resources at all. To that end, the parties agree to the following:

- The parties will support the development of an Energy Efficiency Portfolio Standard (EEPS) for the State of Hawaii. The Hawaiian Electric utilities will support the State's

effort in incorporating such EEPS in State statute, and will use its best efforts to achieve the energy efficiency goals established in the EEPS.

- By April 1, 2009, the Hawaiian Electric utilities will initiate a load research program to obtain detailed energy usage information about Hawaii energy customers' electricity and gas appliance age and efficiency, energy use patterns, building energy use and efficiency characteristics, so this information can be used to develop energy efficiency and mass market renewables program designs and for future energy planning efforts.
- Beginning on April 1, 2009, the utilities will lead, in collaboration with the State and third-party administrator, new studies to determine the technical and economic potential for a broad variety of energy efficiency, demand response, and renewable substitution measures within Hawaii. The cost of such studies will be recovered through an appropriate surcharge mechanism.
- The third party administrator will take over the administration of all energy efficiency programs as ordered by the Commission. The parties believe that the utilities should be allowed to apply for and will support the utilities continued provision of energy efficiency programs to commercial and industrial customers, upon the administrator's and Commission's review and approval, for a three-year period while the third-party administrator gets established and defines the overall program direction;
- The third-party administrator, utilities and stakeholders (such as the IRP Advisory Group and C&I customers) will work together in a collaborative process to design effective, high-impact energy efficiency and renewable substitution programs that are expressed in five-year program plans.
- The State and utilities will work with the third-party administrator and stakeholders to identify and deliver a set of energy efficiency measures that are specifically targeted to benefit low income electric and gas users, and fund delivery of those measures through the Public Benefits Fund.
- By June 2009, the Commission, State and utilities will identify no fewer than six energy efficiency measures or sets of measures that can achieve high penetration and high savings impact quickly and cost-effectively, and develop a plan to begin delivering those measures to Hawaii electric customers beginning no later than September 2009. These programs can be funded by eliminating other efficiency programs that have been found to have less impact at higher cost, and will be implemented by the third-party administrator.
- The parties also agree that Hawaiian Electric may apply to implement the Residential New Construction (RNC) program, Residential Customer Energy Awareness (RCEA) program and the Residential Solar Water Heating (RSWH) program but that the State will not necessarily support their applications.
- The energy efficiency programs shall not provide incentives to encourage customers to switch to other fossil fuels.
- The parties agree to support the enactment of an energy efficiency portfolio standard at the 2009 session of the Legislature.

Upon approval of the programs by the Commission and the program responsibility is transferred to the third-party administrator, the utilities and the third-party administrator will

have budget flexibility to use the resources available to achieve the stated goals and energy use reduction targets and program goals within broad guidelines that permit the pursuit of market opportunities, but preserve the ability of customer segments to have equitable access to program participation.

13 Demand Response Programs

Demand Response programs, including load management programs, are a critical component of the reduction of electrical energy use. These programs allow specific customer loads to serve the interests of all ratepayers by allowing those loads to be controlled for grid reliability and cost management. In order to achieve the maximum potential of these programs, the parties agree to the following:

1. Administration of demand response should remain with the utilities because of the need to monitor electrical system status while deciding when and to what degree to invoke the demand reductions available through demand response programs.
2. The utilities should update direct load control programs to enable use of the programs as an emergency grid management option. MECO and HELCO will propose the implementation of new demand response programs and submit an application seeking Commission approval of such programs by June 30, 2009. Hawaiian Electric will determine the modifications deemed necessary to the existing direct load control programs currently authorized by the Commission. A well-designed demand response program is beneficial because the program enables the utility to maintain reliability during grid emergencies and defer generation additions.
3. The utilities will also explore the use of demand response as a mechanism to accommodate more renewable energy and to manage frequency fluctuations resulting from intermittent renewable resources connected to the grid and provide a recommendation for such use to the Commission by December 31, 2009, including a request for Commission approval for implementation.
4. Third-party demand response or load curtailment aggregators have demonstrated the ability to develop a variety of price-responsive event and responsive demand response options. Hawaiian Electric will work with these firms to insure the maximum use of this resource and propose an initial plan of action by June 30, 2009. In addition, Hawaiian Electric may conduct pilot projects with aggregators, which will provide an opportunity to demonstrate the value of their programs. Proposals seeking Commission approval for such pilot projects will be submitted by December 31, 2009.
5. Demand response pilots are a low risk approach to test new concepts, and test new communication technologies and hardware in island salt-spray environments separated by mountain ranges, valleys and ridges. Demand response pilots can also test software that will interface with existing customer information systems and test customer response to

demand response program designs and delivery. Thus, pilot programs may be an appropriate avenue to implement demand response in Hawaii. The Hawaiian Electric Companies will provide the Commission with an evaluation of the initial proposed pilot projects together with a proposed implementation date by December 31, 2009.

6. The Hawaiian Electric utilities will explore enabling technologies, and if appropriate, will add them to the system to make it easier for customers to receive energy pricing or event information and change or manage their energy use based on this new information. An assessment of such technologies will be incorporated into the Hawaiian Electric Companies' Clean Energy Scenario Planning process.

7. The utilities will also allow demand response to provide a variety of ancillary services and encourage those demand-side ancillary services if they can be provided more precisely than supply-side resources. An assessment of the benefits of using demand response to provide ancillary services will be incorporated into the Hawaiian Electric Companies' Clean Energy Scenario Planning process.

8. Program costs for existing and any new demand response programs shall be recovered through DSM surcharge.

14 Advanced Metering Infrastructure (AMI)

Advanced Metering Infrastructure is a critical component of a number of important aspects of the Clean Energy Initiative. The parties believe that AMI will help customers manage their energy use more effectively. To that end, the parties agree on the following:

1. Hawaiian Electric will apply to the Commission by November 30, 2008, for immediate approval to begin installing, on a first-come, first-served basis, advanced meters for all customers that request them. The application will also seek expedited approval to fully implement time-of-use rates on an interim basis for the customers requesting the installation of advanced meters. Unless the Commission identifies a compelling reason to do otherwise, all customers having advanced meters will be given the utility time-of-use or dynamic rate options and shall have to affirmatively opt out of the rate option.

2. The meters and associated costs will be paid for through the CEIS, until such costs are embedded and recovered in the utilities' base rates in future rate cases.

3. By December 31, 2008, Hawaiian Electric will file a full application to install advanced meters to remaining customers and the communication and meter data management system, including the necessary software and appropriate pricing programs. The PUC application will identify the desired goals, business purposes, functionality and cost for advanced meters and the identification of a meter data management system with associated costs to purchase and install that will achieve the desired goals and purposes, including a

schedule for acquisition and installation of remaining meters and the customers to be served.

4. Upon Commission approval, AMI will be implemented as quickly as possible, along with proposals for time-of-use rates and customer electricity pricing information that facilitate substantive customer understanding and energy use management.

5. Hawaiian Electric will minimize the financial impacts on low income and disadvantaged customers who have limited options through a combination of tiered rates and lifeline rates.

6. The Hawaiian Electric utilities working with external experts will submit to the Commission an evaluation of the effectiveness of the utilities' time-of-use rates and shall determine whether any changes are needed to the energy information communications and time-of-use rates to improve customers' energy responsiveness. The utilities will complete this evaluation by December 31, 2009 and will submit a second report 1 year after the full deployment of AMI.

7. Beginning January 1, 2009, the utility will submit an annual report to the Commission on the number of customers currently served, number who opted out, customer load response, impact of time-of-use rates on customer's monthly bills and feedback received from customers.

15 Pricing Principles and Programs

The pricing of electrical services can be used to motivate changes in customer electrical usage and allow customers who choose to take advantage of specific pricing programs to manage their electric bills. The parties agree that rates must recover the basic costs of utility service and further agree to the following:

The parties believe that rates should reflect the Bonbright principles, which promote fairness in cost allocation, promote efficient resource use, are practical to implement, easy to interpret, provide bill stability for the customers, avoid undue discrimination between customers, and provide adequate and stable revenues to Hawaiian Electric. Rates must reflect the basic cost of service.

The parties also believe that participation in pricing programs should generally be on an opt-out basis.

With those principles in mind, the parties agree that the Hawaiian Electric utilities will continue to convert the residential rates to inclining block rate structure to encourage energy conservation and efficient use of energy. The utilities will complete this conversion of the residential rates as part of the current rate cases before the Commission.

In the case of commercial and industrial customers, the current declining block rate structure will be replaced with mandatory time-of-use for all C&I customers. The utilities will

complete the implementation of mandatory time-of-use rates to commercial and industrial customers by class as AMI is implemented. Demand response options, parallel with AMI deployment, will be offered to all C&I customers. Hawaiian Electric will, on a continuing basis, evaluate the effectiveness of the program and customer response.

16 Meeting the Military's Needs

The parties understand that the military services have specific objectives to improve energy efficiency in existing and new facilities, reduce dependence on fossil fuels, and improve military installation energy security while containing costs. The parties agree to support the military's energy goals, and agree to allow the utilities to meet the military energy service needs through competitive or other service contracting methods as long as the utilities can provide such services in a way that benefits rather than compromises other ratepayers.

In order to meet the military service needs, various requests for proposals are being prepared that will seek specific technologies and resources through mechanisms such as Energy Savings Performance Contracts, Utility Energy Service Contracts, and Enhanced Use Leasing. Possible services the Utility could provide include Distributed or On Site Generation, Energy Efficiency Programs, Advanced Metering, Smart Grid technology, Load Control programs and Renewable Energy delivery.

Hawaiian Electric Company will actively participate in these processes and believes that retaining military service customers is in the best interests of all residents in the state of Hawaii. The State agrees to support the military processes and decisions.

17 Seawater Air Conditioning (SWAC)

Seawater Air Conditioning is an established energy displacement technology and is considered an important resource that all parties strongly support. Therefore the parties agree to support rebates for individual buildings or customers that choose SWAC and expedited SWAC permit review and approval by all State and County agencies, starting with the downtown Honolulu SWAC project.

All parties agree to support:

1. Rebates that incent individual buildings to sign up for these projects;
2. Adoption by individual customers in the affected areas;
3. Expedited permit and approval review and action by all State and County agencies.

The parties support the initial project, the downtown Honolulu Seawater Air Conditioning (HSWAC) to be installed by 2010, with other projects to follow.

18 Distributed Generation (DG) and Distributed Energy Storage (DES)

Distributed generation, including biofueled and fossil facilities, combined heat and power, and small renewable technologies such as wind and photovoltaics, can help replace central station generation and improve local grid operations and reliability. Similarly, DES (such as batteries, ice storage systems, flywheels and super-capacitors) can aid in firming intermittent renewables and provide load shifting and peak-shaving capabilities. To support and accelerate the adoption of DG and DES (termed broadly, distributed energy resources), the parties agree to the following:

1. The Hawaiian Electric Companies will facilitate planning for distributed energy resources through the Clean Energy Scenario Planning process and Locational Value Maps, to identify areas where these resources have system benefits and can be reasonably accommodated. The Locational Value Maps will be completed and become publicly available by December 31, 2009.
2. The utilities will support non-utility DG and DES by improving the process and procedure for interconnecting non-utility DG and DES to make it faster, efficient, and more transparent. By June 30, 2009, the Hawaiian Electric utilities will submit a review of the implementation of the Rule14H tariffs, as amended in May, 2008.
3. All parties will support reconsideration of the Commission's ban on utility-owned DG where it is proven that utility ownership and dispatch clearly benefits grid reliability and ratepayers' interests, and the equipment is competitively procured.
4. If Hawaiian Electric owns any DG, it will power those units using sustainable biofuels or other renewable technologies and fuels.
5. The utilities may contract with third parties to aggregate fleets of DG or standby generators for utility dispatch or under PPA, or may undertake such aggregation itself if no third parties respond to a solicitation for such services.
6. To the degree that transmission and distribution automation and other smart grid technology investments are needed to facilitate distributed energy resource utilization, those investments will be recovered through the Clean Energy Infrastructure Surcharge and later placed in rate base in the next rate case proceeding.
7. The Hawaiian Electric Companies will support DES either customer-owned or utility-owned.
8. All parties will support Hawaiian Electric dispatchable standby generation (DSG) units upon showing reasonable ratepayer benefits.
9. In order to accept higher levels of DG on the utility grid, significant investment in smart grid technologies and changes in grid operations may be needed. These investments, if

demonstrated to be prudent and reasonable in cost, will be recovered through the Clean Energy Infrastructure Surcharge or through the general rate case recovery process.

19 Net Energy Metering (NEM)

The parties are in agreement that there should be no system-wide caps on net energy metering at any of the Hawaiian Electric utilities. Instead, the parties agree to the following:

- Distributed generation interconnection will be limited on a per-circuit basis, where generation (including PV, micro wind, internal combustion engines, and net metered generation) feeding into the circuit shall be limited to no more than 15% of peak circuit demand for all distribution-level circuits of 12kV or lower;
- New DG requests shall be processed and interconnected on a first-come, first-served basis unless the Commission specifies some other method;
- For those circuits where interconnection requests (particularly for PV) approach the 15% limit, the utility will perform and complete within 60-days after receipt of an interconnection request, a circuit-specific analysis to determine whether the limit can be increased. For non inverter-based DGs, the analysis to determine whether the limit can be increased will be performed on a case-by-case basis based on the specifics of the DG project(s) proposed;
- If the utility believes a specific DG installation poses a significant risk to circuit reliability and safety or grid stability, it will notify the applicant, the Consumer Advocate and the Commission, within 30 days from receipt of the completion of a circuit analysis and the identification of the need to defer the installation until further analysis can be conducted, and shall conduct that analysis within no more than three months from the date of the application request.

NEM currently provides an interim measure to encourage the installation of and pay for renewable energy generated from customer-sited systems, generally PV systems. The parties agree that NEM will be replaced with an appropriate feed-in tariff and new net metered installations shall be required to incorporate time-of-use metering equipment and, when time-of-use rates are implemented on a full scale basis in Hawaii or the applicable area, the net metered customer shall move to time of use net metering and sale of excess energy.

As part of the Clean Energy Scenario Planning ("CESP") process, Locational Value Maps ("LVM") identified in the CESP process can trigger an engineering review by the Hawaiian Electric Utilities to determine whether circuit limits can be safely raised above the threshold for the specific circuits in the LVM and if distribution circuit modifications can be made to increase the level of DG/NEM within the LVM.

Current provisions relating to interconnection requirements will remain in force.

20 Lifeline Rates

The Hawaiian Electric Companies and Consumer Advocate agree to explore by April 2009, the possibility of establishing "lifeline rates", which are designed to provide a cap on rates for those who are unable to pay the full cost of electricity and submit a proposal for Commission approval by April 2009.

21 The Gas Company

The Hawaiian Electric Companies and The Gas Company are energy providers to a common group of customers and their collaboration can accelerate the success of the HCEI. Hawaiian Electric welcomes The Gas Company's interest in producing renewable and sustainable fuels and will make every effort to use these renewable fuels in its existing and future power plants.

22 Green Contracting

Because select ratepayers of the utilities have renewable energy obligations or otherwise have a desire to obtain green attributes, and because renewable energy in Hawaii, unlike on the mainland, is cost competitive with and often cheaper than non renewable energy, the parties agree that green attributes should be separated from green energy pricing, and that the price benefits of green energy and the price stability it provides, should be shared by all ratepayers. However, the best method to achieve this goal requires further evaluation, so the parties agree to help the Commission evaluate options for green contracting and RECs by May 2009 and recommend a preferred path forward to the Commission.

23 Resource Attributes: The Loading Order

The parties agree that the maximum possible use must be made of energy efficiency, demand response and renewable energy. The utilities shall apply this loading order in the CESP process in determining the utilities' resource plans to supply the total system load.

24 Public Benefits Fund ("PBF")

The parties agree that energy efficiency resources should be funded using a Public Benefit Fund. The parties agree to the following:

- Respectfully request that the Commission establish a PBF that is funded by collecting 1% of each Hawaiian Electric utility's total revenues in years one and two; 1.5% in years three and four; and 2% thereafter. Once sufficient load research and potential studies

allow more precise identification of the cost-effective and achievable levels of energy efficiency, the PBF collection amount will be based upon the desired level of such investments;

- The Commission may adjust the PBF funding levels on a year-to-year basis. The monies shall be dedicated to the support of programs for the utility and ratepayers from whom the funds were collected, except for studies which can benefit the ratepayers of all of the Hawaiian Electric utilities;
- Funds not spent in one year can be rolled over to another year and shall not be available to meet any current or past obligation of the State;
- PBF monies will be spent for energy efficiency programs measures, incentives, market transformation, technical assistance, program administration, customer education, potential studies, and measurement and evaluation, as expended by the third-party administrator or program contractors, which may include the utilities;
- PBF monies for incentives and subsidy payments shall be allocated among programs, measures, and customer groups at the discretion of the Commission with input from the utility, third-party administrator, and other stakeholders;
- Criteria for fund allocation shall include program cost-effectiveness, likelihood of achieving high levels of energy savings and measure saturation, and equity between customer classes. Allocations and incentive levels that are set by the Commission should remain stable for a period necessary to allow for program certainty and continuity for utility customer and service providers. Adjustments based on market conditions and program evaluations are appropriate;
- Program funding should remain stable long enough to create program certainty and continuity for program providers and utility customers;
- At least 10% of each Hawaiian Electric utility's PBF shall be spent on programs that serve low-income customers. The Commission has the discretion to adjust the amount after review of relevant potential studies and input from the utility and other stakeholders.

The Hawaiian Electric utilities shall encourage its customers whose bills are in arrears to take advantage of available energy efficiency programs and provide timely information and assistance on the programs available to them.

25 Investment in the Infrastructure

The parties agree in principle that maintaining the basic infrastructure of the current electrical system is a critical foundation to all other aspects of the Hawaii Clean Energy Initiative.

Furthermore, the parties also agree that it may be necessary to make additional investments in transmission, distribution, and generation to facilitate and integrate high levels of renewable energy production, and that those investments will be determined through the Clean Energy Scenario Planning process. The parties specifically reject deferred maintenance as an operating philosophy and commit to supporting reasonable and prudent investment in the ongoing maintenance and upgrade of the existing generation,

transmission, and distribution systems, unless the CESP process determines whether specific investments previously identified as being needed are subsequently rendered unnecessary through the implementation of effective energy efficiency, demand response, and distributed energy resources or non-utility generation.

26 The Smart Grid

The parties agree in principle that a "smart grid" is a critical component of Hawaii's energy future. A smart grid builds upon existing utility generation, transmission and distribution, using automation, communications, analytics and controls to operate the grid more efficiently, reliably, and safely, and improve the integration and use of intermittent renewables, demand-side and decentralized resources. The parties agree to the following:

1. Increased levels of SCADA may be necessary for the Hawaiian Electric Companies' distribution system. Evaluating and prioritizing which circuits to implement SCADA will include reviewing the levels of distributed generation by circuit and in total on each utility system, as well as the levels of monitoring, control systems, protection systems, and communications systems required to maintain system stability. The level of SCADA additions to the distribution system will be a significant consideration in evaluating system changes and upgrades required to maintain system reliability as each utility adds more renewable distributed generation to its system. Hawaiian Electric utilities will complete this evaluation and review of its circuits by December 31, 2009, and will submit a report of the results and recommendations to the Commission by such date.
2. As wind and solar systems are added to the grid, particularly at the distribution level, the utilities shall increase their real-time monitoring of the transmission and distribution system capability that includes monitoring of environmental factors such as wind speed, sunlight intensity and temperature.
3. In conjunction with an increased data collection capability as noted above, it may be necessary to install and implement forecasting and monitoring systems to better predict the wind and cloud patterns that affect variable renewable generation.
4. There is a need to develop an increased capability to remotely and automatically control transmission and distribution systems through the use of remote switching devices, voltage regulations devices, protective relaying, and individual distributed generation installations and individual loads.
5. In distribution circuits where DG penetration approaches levels which impact the effectiveness of static protective relaying, it may be necessary to upgrade the relay system to accommodate dynamic settings and higher penetration levels of distributed generation.
6. It may be necessary to implement distribution automation; transmission and distribution technologies and microgrids which address self-healing, resistance to attacks, power quality,

and accommodation of non-renewable generation. These technologies are intended to open new markets and increase grid efficiency and should be implemented if demonstrated to be cost effective.

7. Prudent and cost effective investment in smart grid technologies may be recovered through the Clean Energy Infrastructure Program or the general rate case process.

27 Transmission Planning

Transmission remains a key responsibility of the Hawaiian Electric Companies and a critical element of a clean energy future. To that end, the parties agree to the following:

1. The Hawaiian Electric Companies will perform and complete the planning analysis required to evaluate several scenarios under the Clean Energy Scenario Planning (CESP) process.
2. The CESP will identify new transmission projects for which the Hawaiian Electric Companies will then pursue PUC approval to proceed with the construction of the projects.
3. Transmission investments made to fulfill Clean Energy Scenario plans or renewable energy development zone commitments will, to the greatest extent possible, be supported by all parties including requests for the expeditious processing of the applications filed with the PUC.
4. Integration of generation (renewable, variable, or firm) is a complex process and the Hawaiian Electric Companies' transmission and distribution planning analyses are necessary for evaluating generation interconnection proposals. The utilities will conduct the required evaluations within 6 months after receipt of a bona fide generation interconnection request. The utility may request additional information if it believes data received is incomplete or if additional data is required to complete an IRS, but cannot use a series of additional data requests to delay the process. The burden is on the utility to demonstrate that the additional data requests are necessary, or else the time to respond to data requests cannot be used to extend the 6-month deadline.

28 Decoupling from Sales

The transition to Hawaii's clean energy future can be facilitated by modifying utility ratemaking with a decoupling mechanism that fits the unique characteristics of Hawaii's service territory and cost structure, and removes the barriers for the utilities to pursue aggressive demand-response and load management programs, and customer-owned or third-party-owned renewable energy systems, and gives the utilities an opportunity to achieve fair rates of return. The parties agree in principle that it is appropriate to adopt a

decoupling mechanism that closely tracks the mechanisms in place for several California electric utilities, as follows:

1. The revenues of the utility will be fully decoupled from sales/revenues beginning with the interim decision in the 2009 Hawaiian Electric Company Rate Case (most likely in the summer of 2009).

The utility will use a revenue adjustment mechanism based on cost tracking indices such as those used by the California regulators for their larger utilities or its equivalent and not based on customer count. Such a decoupling mechanism would, on an ongoing basis, provide revenue adjustments for the differences between the amount determined in the last rate case and:

(a) The current cost of operating the utility that is deemed reasonable and approved by the PUC;

(b) Return on and return of ongoing capital investment (excluding those projects included in the Clean Energy Infrastructure Surcharge); and

(c) Any changes in State or federal tax rates.

Adjustments shall occur on a quarterly basis, semi-annual, or annual based on the availability of the indices utilized. The adjustments will continue until such time that they are incorporated in the utility's base rates.

2. The parties agree that the decoupling mechanism that will be implemented will be subject to review and approval by the PUC.

3. The utility will continue to use tracking mechanisms for Commission-approved pension and other post-retirement benefits to ensure that the expenses are evened out for the ratepayer and are not subject to sudden and dramatic swing.

4. The Commission may review the decoupling mechanism at any time if it determines that the mechanism is not operating in the interests of the ratepayers.

5. The utility or the Consumer Advocate may also file a request to review the impact of the decoupling mechanism.

6. The Commission may unilaterally discontinue the decoupling mechanism if it finds that the public interest requires such action.

7. In order to implement the decoupling mechanism, the parties agree that HELCO and MECO will file for a 2009 test year rate case.

29 Clean Energy Infrastructure Surcharge (CEIS)

The Clean Energy Infrastructure Surcharge is designed to expedite cost recovery for infrastructure that supports greater use of renewable energy or grid efficiency within the utility systems. The parties agree to support the following:

1. The establishment of a CEIS to recover the reasonable costs of new transmission and other infrastructure investment needed to facilitate new clean energy investments by the utility or by IPPs. Subject to Commission approval, the CEIS may also be used to recover costs that would normally be expensed in the year incurred and may be used to accelerate cost recovery.
2. Capital costs eligible for recovery through the CEIS include the allowed return on investment based on the rate of return from the last rate case, AFUDC as appropriate, depreciation, applicable taxes, other costs as approved by the Commission.
3. The reasonable costs of infrastructure investments will be eligible for cost recovery through the CEIS if it can be demonstrated that the investments facilitate greater grid efficiency as determined and approved by the Commission, such as advanced meters and grid automation.
4. The reasonable costs of infrastructure investments that may be recovered through the CEIS, as determined by the Commission, include transmission lines built, in significant part, to facilitate renewable energy development, inter-connection equipment, advanced metering infrastructure, battery storage, and other equipment to facilitate increased use of renewable energy whether utility or third-party owned.
5. The CEIS may also be used to recover costs stranded by clean energy initiatives when approved by the Commission.
6. The CEIS is a mechanism to timely recover: (a) costs that would be expensed in the year incurred; and (b) a return on and of the costs of specific capital projects deemed necessary for the achievement of the HCEI objectives. The CEIS is not a financing vehicle for the Hawaiian Electric Companies.
7. If the utility is conducting a very costly capital investment project and receives Commission pre-approval for Construction Work in Progress (CWIP) rate base treatment, the utility can use the CEIS to recover the return on the CWIP asset. If the CWIP investment is given rate base treatment, it shall not earn AFUDC.
8. The CEIS will be implemented as a separate surcharge.
9. Cost recovery under the CEIS will terminate when and to the extent that the costs are incorporated in the utility's base rates.
10. The CEIS surcharge will be reset on an annual basis to recover: (1) the capital and other related costs (as noted in paragraph 2 above) incurred by the utilities relating to the

adoption and integration of the renewable energy resources commitments identified in Exhibit A; (2) the change in the return on investment resulting from the change in the unrecovered cost of the projects completed in years prior to the immediately preceding year; and (3) the true up resulting from the reconciliation of the estimated and actual collections for the immediately preceding year. The new CEIS will take effect on March 1 of each year to allow for consideration of the Commission approved: (1) final costs of capital projects completed ; (2) changes in the return on the net book value of the capital asset at the end of the immediately preceding year; (3) the results of the reconciliation to be performed by January 31 of each year of the estimated and actual costs to be recovered in the CEIS for the preceding year; and (4) any costs that should be expensed in the prior year, but are approved for recovery in the CEIS. The Hawaiian Electric utilities, the State, and the Consumer Advocate shall work in collaborative fashion in developing the implementation procedure of the CEIS recovery mechanism, for submission for PUC approval by November 30, 2008.

11. It is probable that it will be easier to achieve higher levels of renewable energy generation on islands other than Oahu. Subject to Commission approval, the CEIS may be used as a mechanism to have Oahu's ratepayers pay for some of the cost burden of new renewable energy developments on the MECO and HELCO systems.

The utility has a Renewable Energy Infrastructure Program (REIP) pending at the Commission. The parties have no objection to the use of this docket after approval of the REIP to change the REIP to incorporate the CEIS mechanism changes, provided public notice is given to the ratepayers of the Hawaiian Electric Companies of the substitution changes and public hearings are held regarding the change, consistent with the requirements of HRS § 269-12.

30 Energy Cost Adjustment Clause (ECAC)

The parties agree that the goal of utility resource purchases is to maximize the purchase of renewable energy (and particularly locally-produced renewable energy), to de-link the renewable energy contracts from oil prices, and to stabilize, to the extent possible, ongoing fuel prices, in that order. To that end, the parties agree to the following:

- The Hawaiian Electric Companies may engage in limited hedging and forward contracting for both energy and fuel using guidelines and practices to manage both cost and risk, as approved by the Commission;
- The Commission will periodically review and approve the prudence and effectiveness of the Hawaiian Electric Companies' utility's fuel and energy procurement practices to ensure that the requirements of the energy cost adjustment clause are met. The Commission will examine whether there is renewable energy which the utility did not purchase or whether alternate purchase strategies were appropriately used or not used; and

- The Hawaiian Electric Companies will be allowed to pass through reasonably incurred purchase power contract costs, including all capacity, O&M and other non-energy payments approved by the Commission (including those acquired under the feed-in tariff) through a separate surcharge.
 - If approved, these costs will be moved from base rates to the new surcharge.
 - The surcharge will be adjusted monthly and reconciled quarterly.

31 Preferred Stock / Hybrid Securities Offering

The utility must raise sufficient capital to fund the necessary infrastructure required for the Hawaii Clean Energy Initiative, and will do so in part by issuing a preferred stock/hybrid securities offering. Preferred stock/hybrid securities represent a less expensive form of financing than equity, but does not negatively impact the utility's debt ratio as much as debt issuance would. The parties agree to support a reasonable preferred stock/hybrid securities offering proposal made by the Hawaiian Electric utilities to the Commission.

32 Clean Energy Scenario Planning (CESP)

To improve analysis and guidance for Hawaii's clean energy future, the parties agree to replace the current Integrated Resource Planning (IRP) process with a new Clean Energy Scenario Planning (CESP) process. The parties agree to the following:

- The CESP process will provide high level guidance on long term (10-20 years) direction and an Action Plan for near term initiatives (5 years), balancing how the utility will meet its customers' expected energy needs as modified by planned energy efficiency, renewables substitution and demand response, encouraging high levels of renewable and clean energy with distributed resources, while protecting reliability at reasonable costs.
- The CESP process will be conducted on an on-going basis with a new Clean Energy Scenario Plan developed in three-year cycles. The CESP process will include exploring alternative energy scenarios, risks and uncertainties, to develop a base case and variations for a 20-year planning horizon.
- Since clean energy actions and choices on one island may affect the entire State, all Hawaiian Electric utilities shall conduct the CESP process in parallel or as one CESP process for all three utilities, using common economic and other assumptions and common scenarios for technology, economic, and development paths and options, while maintaining the option to also develop island-specific scenarios.
- The Hawaiian Electric utilities shall conduct a comprehensive generation and transmission analysis every three years to support the evaluation of several planning scenarios to be considered in developing the new base case. In addition, the Hawaiian Electric utilities shall provide Locational Value Maps that will guide the identification of geographic areas of distribution system growth for potential application of new energy

efficiency, demand response, and distributed generation and storage within Clean Energy Investment Zones.

- The CESP process will incorporate an Advisory Committee and a public review process;

Hawaiian Electric Company will complete and submit the Hawaiian Electric IRP-4 to the Public Utilities Commission by September 30, 2008. The Commission will receive the Hawaiian Electric IRP-4 and will be requested to close the docket and suspend HELCO's and MECO's IRP-4 dockets.

Hawaiian Electric Company shall request Commission approval to implement items in the Action Plan that otherwise require approval through the IRP-4 process.

The parties will request that the Commission open a new docket to establish the CESP process.

Pending the Decision and Order establishing the CESP process, each Hawaiian Electric utility will continue to meet with its Advisory Committees and file annual updates to its respective IRPs.

The parties agree that the specifics of the CESP Process, including the new CESP objectives and framework, are subject to Commission review and approval. Some of the specifics as may be proposed by the Hawaiian Electric utilities are described below.

33 Clean Energy Scenario Plan

Each utility will conduct a comprehensive generation and transmission analysis every three years to support the evaluation of several planning scenarios under consideration in the development of the new base case and will provide Locational Value Maps that will guide the identification of geographic areas of distribution system growth for potential new energy efficiency (EE), distributed response (DR), distributed generation (DG) and renewable substitution.

The Clean Energy Scenario Plan will take into consideration greenhouse gas emissions, impacts to local natural resources and to the local economy. The Clean Energy Scenario Plan will also identify, understand and characterize the risks and uncertainties that can make a significant difference to the utilities' resource selection. As Hawaii transitions to greater integration of new renewable resources, it will increase the factors to manage the electric system, and the level of reliability may at times be impacted.

The Clean Energy Scenario Plan should define a manageable scope for the process, which includes annual updates (such as changes to the plan resulting from changes in sales and peak forecasts, fuel prices forecasts, new or changes in timing of generation resources, changes in penetration of DSM and other demand-side resources, etc.) to keep plans "fresh" with updated assumptions and to address/account for new issues (such as NEM limits). The

Clean Energy Scenario Plan must comply with requirements of the Competitive Bidding for New Generation Framework.

The Clean Energy Scenario Plan will include the following components subject to Commission review and approval:

a. **Scenarios** - The Clean Energy Scenario Plan should focus on higher level planning, such as scenario analyses and a preferred portfolio of energy sources/types, rather than identifying specific details on individual resources of the plan. These scenarios may feature different policy backdrops, such as major increases or decreases in oil prices, policy changes such as federal or international carbon regulation or the accelerated adoption of plug-in hybrid electric vehicles, as well as different resource policies that the PUC can influence or direct, such as higher levels of energy efficiency, demand response, and renewable substitution (e.g., solar water heating and seawater-cooled air conditioning). A reasonable number of Clean Energy Scenario Plan scenarios should be developed in consultation with the State, PUC and stakeholders to reflect a range of the possible energy-related policy choices and risks facing the State, its utilities and citizens.

b. **Base case and variations** - The Clean Energy Scenario Plan should start with a base case of the current IRP or Clean Energy Scenario Plan that incorporates current and forecast loads, demographics, economic conditions, fuel availability and prices, existing and planned resources (supply- and demand-side) and their capital and operating costs, and more other relevant information.

c. **Analysis** - The Clean Energy Scenario Plan should be supported by quantitative and qualitative tools to process data. Analysis tools may include production simulation models, load flow models, and resource screening models that employ, among several methods, probabilistic and Monte Carlo techniques to derive probability based results.

The Clean Energy Scenario Plan will use production simulation and resource screening models to identify the preferred energy contributions from various resources, taking into account the differing renewable energy impact, emissions, fossil fuel usage and cost into consideration. Existing contractual and forward looking operational requirements and constraints on the mix of generation types (such dispatch and curtailment requirements) will be factored into the analysis.

In addition to scenario analysis, technical analyses will need to be performed to determine the extent to which renewable resources with certain types of characteristics (e.g. intermittent, as-available resources, or fixed dispatch resources) can be integrated into the system while maintaining a stable and reliable electrical grid.

d. **Scope** - Clean Energy Scenario Plan includes an assessment of supply-side additions, supply-side retirements (or purchase power contract terminations) and demand-side resources as well as transmission requirements. Clean Energy Scenario Plan excludes an analysis of the distribution system, but should be coordinated with distribution planning to reflect the value and influence of distributed resources (energy efficiency, demand response,

renewable substitution and distributed generation) and to identify technical or operational issues that may arise if customer resources (especially customer-side distributed generation) develops into a high percentage of circuit or system demand.

e. **CESP process Advisory Committee** - At the start of the CESP process, the utility should form an advisory committee composed of key stakeholders (including the third-party energy efficiency program administrator), policymakers and customers to help the utility shape the scenarios and business cases, resource options, analysis, interpretation and public review processes.

f. **Renewable Energy Zones (REZ)** - REZ identification will be performed in coordination with the utility CESP process. The utility may request input from consultants and/or national agencies, such as NREL, who understand the potential areas of renewable energy development. With the support of these consultants, existing transmission facilities could be overlaid onto Geographic Information System (GIS) maps with the identified renewable resource locations.

g. **System analysis** - The utility should conduct a thorough, load flow transmission system analysis building on the base case assumptions and forecasts (including any known and measurable changes), evaluating grid conditions and flows for no less than a three-year period. That analysis, informed by relevant economic, load, and demand-side resource cases and scenarios, should be the basis for utility planning. The Clean Energy Scenario Plan would evaluate system level distributed generation and demand-side management (DSM) impact, taking into account the aggregate system impact to load and load flows on the transmission system to determine transmission and generation system benefits. Localized impacts to system loads will be taken into account in the transmission analysis as they are realized during the development of the base case model.

h. **The CESP process identifies fossil needs** - The CESP process will identify if new fossil fueled units are needed. These should be justified primarily by the need to balance and integrate variable renewable energy generation sources for overall grid reliability.

i. **Locational Value Map** - The utility will identify "geographic areas of distribution system growth" within the next 3-5 years where distributed resources and energy efficiency could be beneficial within the existing transmission and distribution system limits. The utility would identify "geographic areas" rather than individual circuits (i.e., today for Oahu, could identify the West side from Ocean Pointe to Ko 'Olina; for the Big Island, various areas in West Hawaii and North Hawaii; for Maui, areas of Kihei and Lahaina) to maximize benefits and incorporate back up system needs. The information from the Locational Value Maps would be provided to parties such as the PBF Administrator so that EE DSM can be focused into geographic areas that would most benefit from energy efficiency. Determining value or price in the CESP process will be difficult because the potential to avoid distribution would depend on how much EE was being installed, the amount and type of renewable distributed generation being installed, and the planned operations of the DG resources.

j. **Clean Energy Investment Zones** - The utility should use the Locational Value Map to identify geographic areas where there is a high value to incremental investment in distributed generation, demand response, energy efficiency, or CHP. Such areas will be clearly delineated and termed "Clean Energy Investment Zones." The utility will publicize the existence of these zones, focus efforts to sign up customers, and evaluate the need for an RFP for firm renewable distributed generation in the Clean Energy Investment Zones areas after considering factors such as the ability to meet renewable goals, cost effectiveness of renewable firm distributed generation, lack of proposals for renewable firm generation in the Clean Energy Zones or difficulty in attaining distribution assets within the needed time-frame. The utility will develop a streamlined procedure to help customers, third-party aggregators, and energy service companies contract with the utility to bring new clean energy resources into service in these Clean Energy Investment Zones. All of this information should be publicized in conjunction with the utility's educational efforts following completion of the Clean Energy Scenario Plan.

k. **Cost** - The utility should purchase renewable energy at prices that are increasingly de-linked from oil prices. Avoided costs may be determined from the costs the utility would incur if it installed a renewable resource.

l. **No-regrets resources** - Upon completion of the Clean Energy Scenario Plan analyses, the utility should look for common themes, assets and strategies that demonstrate robust value to balance costs and risks across many of the scenarios and cases examined. These are likely to be "no-regrets" resources and strategies that will give the utility and State the greatest value and flexibility across a wide range of potential futures and uncertainties.

m. **PUC Application for Transmission Assets** - From the CESP process new transmission assets that require PUC approval will be identified. Hawaiian Electric will typically initiate more detailed studies in order to evaluate the appropriate asset to install. The detailed studies will be incorporated into the application for the new transmission asset that Hawaiian Electric submits for PUC approval. Transmission investments made to fulfill Commission-approved Clean Energy Scenario Plans or renewable energy development zone commitments shall require PUC approval pursuant to the requirements of the Commission's administrative rules. Applications for approval submitted by the utility should receive expedited handling and the Hawaiian Electric Companies shall demonstrate the necessity of the project in application filed with the PUC. Upon Commission approval, the project costs may be recovered through either the CEIS or through a general rate case proceeding.

n. **Public review** - For the public review process of the Clean Energy Scenario Plan the Hawaiian Electric Companies shall provide information to policymakers, active stakeholders and the general public about future resource needs, opportunities and costs. The utility should seek feedback from citizens, consumers and policymakers in the State to assure that the Clean Energy Scenario Plan is reflecting the public interest. The process of review should be long enough to communicate effectively the information in the Clean Energy

Scenario Plan to the public audience, and to receive effectively public responses that can be integrated into subsequent planning work.

o. **Regulatory review of the Clean Energy Scenario Plan** - Regulators should review and evaluate the plan to see that it can accomplish its purposes and that it provides the strategic guidance for future utility planning decisions. This approval should elevate the status of the preferred resources identified in the Clean Energy Scenario Plan Action Plan to give them a presumption of need in any subsequent siting proceeding.

p. **Timing of the CESP process** - The utility will submit the new Clean Energy Scenario Plan to the Commission every three years, after a public review process. It is suggested that there should be an expedited time period for the Commission to complete its review and issue an order approving or denying the plan within six (6) months. If the Commission rejects all or parts of the CESP, there should be an explanation for non-approval and the implications of that non-approval on the utility's asset investment and strategic choices for the upcoming three-year period. In order to continually reassess the CESP plan on a regular and timely basis, it is suggested that if the PUC has not issued a decision within a defined period, the plan is automatically deemed "approved." The utility can continue public education about the Plan while it is under review at the Commission.

34 Federal Law and Rules

The energy picture in Hawaii is very different from the energy picture in other states. There are, however, certain Federal laws, which can either assist or hamper the Clean Energy Initiative.

The parties agree to support the following:

PURPA

- Exempt Hawaii from PURPA
 - o Adding an exemption that would cover Hawaii so that the utilities would be authorized to consider independent power producer (IPP) proposals under the State's Competitive Bidding Framework when capacity or energy is needed rather than being compelled to consider purchase power proposals from qualifying IPPs as and when proposed, or to purchase power subject to all the terms and conditions in PURPA. RENEWABLES
- Extend expiration of Biofuels Blender's Tax Credit.
 - o This tax credit will expire on December 31, 2008, before Hawaiian Electric's CIP CT-1 is in service or MECO potentially purchases any biodiesel for its Maalaea units. The tax credit should reduce biodiesel costs for the utilities, and, thus, their ratepayers. The tax credit should also extend to all biofuels.
- Expand PTC for Electric Generation from Biofuels

- This credit is available for electric generation from biofuels, but only for units placed in service after 1992 and before 2006. That timeframe excludes Hawaiian Electric's CIP CT-1 and several MECO Maalaea units.

ENVIRONMENTAL ISSUES

- Include Volcano National Park volcanic air emissions in the background baseline for the Regional Haze Program.
 - EPA's Regional Haze Rules, designed to protect visibility in National Parks, are ambiguous as to the effect of naturally occurring haze. Controlling visibility impairing emissions from Company units would be fruitless and very expensive.
- Allow electrical generation units to switch to green fuels (biofuels) without triggering New Source Review (NSR).
 - Fuel switching could result in increased emissions (primarily NOx), potentially triggering NSR. Costs of NOx control on existing units switching to biofuels would be exorbitant with no appreciable benefit since we do not have a NOx problem in Hawaii.

35 Greenhouse Gas (GHG) Issues

Transforming the state's energy dependence on oil to higher levels of efficiency and renewable energy will substantially reduce Hawaii's Greenhouse Gas (GHG) emissions. Therefore, the parties agree:

- All parties will support a policy for non-carbon or low carbon alternatives in future energy resource planning and selection (i.e. no coal);
- The parties will support and select alternatives which help the State and utility meet the GHG requirements;
- Guiding principles in GHG reduction measures include freedom of choice for energy consumers, a preference for incentives and market-based measures over regulatory penalties, and a balancing of the climate change mitigation burden fairly across all GHG emitters;
- The parties will work collaboratively on State and federal GHG legislation to support the HCEI agreements and measures that take Hawaii's unique conditions into account (e.g., HPOWER, potential federal exemptions, etc.);
- Because of the uncertainties of GHG legislation at the State and federal level, the parties agree to suspend any decision to implement a State REC system until such time when these legislative actions become clear;
- The State shall support and expedite approvals of necessary infrastructure and rate structures, including smart metering, which enable and accelerate measures designed to reduce GHG emissions;
- As a goal during the renewal of power purchase contracts, the parties agree to move the Independent Power Producers to "green" alternatives and GHG compliance.

36 Telling the Energy Story

Public understanding of the Hawaii Clean Energy Initiative's long-term energy security benefits for the State of Hawaii is critical for its success. Taking real action to achieve a clean energy future for our State requires commitment from all stakeholders – State government (including administration, legislature and regulators), utilities, other businesses (including transportation), communities, environmental groups and others. To that end, the parties agree to the following:

The State will take the lead in educating its citizens and businesses on the value of the Hawaii Clean Energy Initiative.

The State, with inputs from the utilities, and other stakeholders, will develop a common set of messages about the importance, rationale for and scope of the Hawaii Clean Energy Initiative. These may include:

- As an island state, without interconnections to a mainland grid, developing clean local energy sources and fully embracing energy efficiency is critical to increase Hawaii's energy security.
- Many solutions for our islands will be different than elsewhere and must take into account the unique conditions of our small, remote, independent utility grids.
- Reducing our dependence on imported oil must address both electricity and transportation.
- Maintaining and upgrading the electric grid is essential to supporting reliable, renewable energy and to using technologies (such as advanced metering) that give customer options for better managing energy use.
- Variable renewable sources -- such as wind, solar, ocean and hydro -- must be an important part of our energy mix. To reliably add large amounts of intermittent renewable energy sources to our small island grids, we need proper planning, new and developing technologies, a mix of fuel-flexible generation resources, and new operational practices.
- Substantial investment will be necessary to develop local renewable energy fuel sources. Energy costs may be higher at first, but in the long run can be more stable than with current volatile oil pricing. In addition, future greenhouse gas or carbon taxes will increase the cost of fossil fuels even further.

These are investments in Hawaii's future we must be willing to make. These are benefits, including energy security and protecting the environment, which we cannot put a price on. By ensuring energy security and protecting Hawaii's special environment, we are creating a more responsible, cleaner future for our families, our communities and our islands. The utility and the State will work together to communicate these key messages to the public.

To maximize public awareness and understanding of this big picture, the communications campaign should utilize a full range of communication vehicles including utility advertising, free media and person-to-person communications with interested groups. Resources for such communications shall be authorized and recoverable.

37 How We Stay on Track

With the Hawaii Clean Energy Initiative, the State, the Consumer Advocate and Hawaiian Electric Company have reached a series of agreements that are critical to shaping Hawaii's energy future. We are each committed to doing our respective parts to carry out our agreements. To that end, the parties agree that:

- The State and utilities will identify a set of metrics that capture and quantify the important elements of the HCEI, and will set up a program to collect that information, calculate the metrics, and regularly report to citizens and stakeholders on the accomplishments of the HCEI relative to its goals;
- The Hawaiian Electric utilities commit to integrate the renewable energy resources, and our responsibilities for achieving the target goals of the programs specified in the Hawaiian Electric's Renewable Energy Commitments provided in Exhibit A;
- The Hawaiian Electric utilities' implementation plan and activities are detailed in Exhibit B. The Parties will meet quarterly and work collaboratively to ensure and monitor the performance and progress in achieving these commitments;
- If one party feels another is not living up to their obligations, they will first raise that issue directly with the other party;
- If there is a substantive breach of this agreement by a party(ies), the other party(ies) is not bound by any provisions that remain unexecuted of this agreement, and may change their position on any dockets already pending before the Commission; and
- Any amendment or modification of this agreement shall not be valid unless it is in writing and signed by the parties. Any waiver hereunder shall not be valid unless it is written and signed by the party against whom waiver is asserted.

HECO TIMELINE

HAWAIIAN ELECTRIC COMPANY, INC. (HECO)

Renewable Energy Commitments	Cumulative Target Goal (MW by year-end)				
	2010	2015	2020	2025	2030
RENEWABLE GENERATION					
IPP Projects (info based on IPP proposals)					
Kahuku Wind	30.0	30.0	30.0	30.0	30.0
Sea Solar OTEC		25.0	100.0	100.0	100.0
Lockheed Martin OTEC		10.0	10.0	10.0	10.0
Molokai and/or Lanai Wind		400.0	400.0	400.0	400.0
Honua Waste-to-Energy		6.0	6.0	6.0	6.0
C&C Waste-to-Energy		11.0	11.0	11.0	27.0
RFP Non-firm RE		100.0	100.0	100.0	100.0
Utility Projects					
Airport DSG (Bio-fuel)	8.0	8.0	8.0	8.0	8.0
DG at substations (Bio-fuel)		30.0	30.0	30.0	30.0
CIP CT-1 (Bio-fuel)	110.0	110.0	110.0	110.0	110.0
CIP CT-2 (Bio-fuel)		110.0	110.0	110.0	110.0
Military DG (Biofuel)		50.0	62.5	75.0	75.0
Total RE Generation	148.0	890.0	977.5	990.0	1,006.0
ENERGY EFFICIENCY/CUSTOMER SITED GENERATION					
PV (through feed-in tariff or PPA)	6.5	23.0	65.0	108.0	140.0
Solar Opportunity					
Mandatory Solar Roofing, SB644	1.0	3.0	6.0	9.0	11.0
Pay-As-You-Save Solar Program	2.0	6.0	10.0	15.0	19.0
PV Host Program	2.0	12.0	22.0	32.0	42.0
Net Energy Metering	5.0	23.0	57.0	97.0	127.0
Distributed Generation & Distributed Energy Resources	0.0	8.0	15.5	23.0	35.0
Seawater Air Conditioning	0.0	16.0	16.0	16.0	16.0
Total EE/DG	16.5	91.0	191.5	300.0	390.0
TOTAL RE & EE/DG	168.5	1,015.0	1,220.0	1,358.0	1,481.0
PEAK REDUCTION/PEAK SHIFTING					
Demand Response Program & Load Management	60.0	73.0	89.0	103.0	116.0
Pricing Programs					
Residential TOU Rates	}				
Commercial TOU Rates		2.0	10.0	20.0	31.0
Industrial TOU Rates		2.0	24.0	31.0	44.0
Critical Peak Pricing					
TRANSPORTATION ELECTRIFICATION					
Plug-In Hybrid Cars (# of Cars, Oahu Only)	600	36,000	66,000	96,000	126,000

10/15/2008

HELCO TIMELINES

HAWAII ELECTRIC LIGHT COMPANY, INC. (HELCO)

Renewable Energy Commitments	Cumulative Target Goal (MW by year-end)					
	2010	2015	2020	2025	2030	
RENEWABLE GENERATION						
IPP Projects (Info based on IPP proposals)						
PGV Geothermal	8.0	8.0	8.0	30.0	30.0	
Hamakua Biomass or Hu Honua		25.0	25.0	25.0	25.0	
Hawaii County Waste-To-Energy		4.0	4.0	4.0	4.0	
Sopogy Solar	0.5	0.5	0.5	0.5	0.5	
Na Makani Wind and PSH		4.5	4.5	4.5	4.5	
Total RE Generation	8.5	42.0	42.0	64.0	64.0	
ENERGY EFFICIENCY/CUSTOMER SITED GENERATION						
PV (through feed-in tariff or PPA)	1.8	7.8	18.0	30.0	39.0	
Solar Opportunity						
Mandatory Solar Roofing, SB644	1.0	4.0	8.0	12.0	15.0	
Pay-As-You-Save Solar Program	0.2	1.0	3.0	4.0	5.0	
PV Host Program	2.0	7.0	12.0	17.0	22.0	
Net Energy Metering	1.3	6.0	14.0	24.0	32.0	
Distributed Generation & Distributed Energy Resources	2.7	6.6	10.0	12.6	12.5	
Total EE/DG	9.0	32.4	65.0	99.6	125.5	
TOTAL RE & EE/DG	17.9	80.4	115.0	172.6	202.5	
PEAK REDUCTION/PEAK SHIFTING						
Demand Response Program & Load Management	0.0	1.0	4.0	4.0	4.0	
Pricing Programs						
Residential TOU Rates	}					
Commercial TOU Rates		0.2	2.0	3.0	3.0	5.0
Industrial TOU Rates						
Critical Peak Pricing		0.2	4.0	5.0	6.0	8.0
TRANSPORTATION ELECTRIFICATION						
Plug-In Hybrid Cars	1,200	7,200	13,200	19,200	25,200	
(# of Cars, Hawaii Only)						

10/15/2008

MECO TIMELINES

MAUI ELECTRIC COMPANY, LTD (MECO)

Renewable Energy Commitments	Cumulative Target Goal (MW by year-end)				
	2010	2015	2020	2025	2030
RENEWABLE GENERATION					
IPP Projects (info based on IPP proposals)					
Shell Wind		21.0	21.0	21.0	21.0
Lanai Solar	1.2	1.2	1.2	1.2	1.2
Oceanlinx Wave		2.7	2.7	2.7	2.7
Pulehu Biomass		6.0	6.0	6.0	6.0
Landfill gas (Waste-to-Energy)		Unknown status.			
KWP II		21.0	21.0	21.0	21.0
Total RE Generation	1.2	51.9	51.9	51.9	51.9
ENERGY EFFICIENCY/CUSTOMER SITED GENERATION					
PV (through feed-in tariff or PPA)	1.8	7.8	18.0	30.0	39.0
Solar Opportunity					
Mandatory Solar Roofing, SB644	1.0	3.0	6.0	9.0	11.0
Pay-As-You-Save Solar Program	0.1	2.0	3.0	5.0	6.0
PV Host Program	2.0	7.0	12.0	17.0	22.0
Net Energy Metering	2.2	10.0	24.0	42.0	54.0
Distributed Generation & Distributed Energy Resources	1.8	4.8	7.8	10.8	12.0
Total EE/DG	8.9	34.6	70.8	113.8	144.0
TOTAL RE & EE/DG	10.5	92.5	131.7	177.7	209.9
PEAK REDUCTION/PEAK SHIFTING					
Demand Response Program & Load Management	4.0	8.0	9.0	10.0	10.0
Pricing Programs					
Residential TOU Rates	}				
Commercial TOU Rates		0.2	2.0	3.0	5.0
Industrial TOU Rates					
Critical Peak Pricing		0.2	4.0	6.0	7.0
TRANSPORTATION ELECTRIFICATION					
Plug-In Hybrid Cars (# of Cars, Maui Only)	1,200	7,200	13,200	19,200	25,200

10/15/2008

HECO TIMELINES

HAWAIIAN ELECTRIC COMPANY, INC. (HECO)		The following milestones are agreed upon by the parties. Any deviation from the milestones will need to be justified by the party and parties involved.																							
Item	ACTIVITIES & TASKS	2008				2009				2010				2011				2012				2013			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
RENEWABLE GENERATION - PV Projects																									
Kahala Wind	Complete term sheet					X																			
	Perform RGS/Regulate PPA						X																		
	Commercial operation date (proposed by IPP)								X																
Sea Breeze OTEC	Complete term sheet					X																			
	Perform RGS & PPA/Regulate PPA						X																		
	Commercial operation date (proposed by IPP)																							X	
Lanikai Marine OTEC	Amplify proposal from IPP								X																
Maui and/or Lanai Wind	Re-submit bids from RFP Non-Firm RE					X																			
	Implementation studies									X															
	Developers agree proposals/terms										X														
	Perform RGS/Regulate PPA											X													
	Submit PPA for approval												X												
Maui Wind-to-Energy	Complete term sheet					X																			
	Perform RGS/Regulate PPA						X																		
	Commercial operation date (proposed by IPP)																	X							
CCG Wind-to-Energy	Request PUC Waiver from competitive bidding																								
	Perform RGS/Regulate PPA												X												
	Commercial operation date (proposed by IPP)																		X						
RFP Non-Firm RE	Developers' Proposals due					X																			
	Select short list of bids					X																			
RENEWABLE GENERATION - WIND																									
Maui Wind (Bids)	Execute O&G Agreement					X																			
	File O&G Agreement for PUC Approval						X																		
	Commercial operation date											X													
OO at substation (Bids)	Construction start					X																			
	Engineering/Technical Evaluation								X																
	Permit and approvals																								
	Construction/Installation																								
OP CT-1 (Bids)	Construction complete							X																	
	Commercial operation date								X																
OP CT-2 (Bids)	Request for orders to PUC						X																		
	PUC application for project						X																		
Re-tuning of Existing Units	Testing on RGS								X																
	Re-tuning study complete									X															
Maui Wind	Prepare O&G Agreement (Timing based on RFP)						X																		
	Execute O&G Agreement									X															
	File O&G Agreement for PUC Approval																	X							
	Commercial operation date																								X
ENERGY EFFICIENCY/CUSTOMER BIDDING PROGRAM																									
Maui Wind	Revised opening of feed-in tariff studies						X																		
Mandatory Solar Roofing, 2004	Revisions to address SBMA4 issues						X																		
Pay-as-you-go Solar Program	Application to expand program to 2,500 systems (kilowatts)						X																		
PV Host Program	Complete program design						X																		
	Submit Program application for PUC approval						X																		
Net Energy Metering	File application with PUC to replace system cap with circuit cap								X																
Energy Efficiency	1) Initial energy usage study							X																	
	2) Load potential study for energy efficiency, demand response, and renewable substitution							X																	
	3) PUC, state, utilities study & energy efficiency measures							X																	
	4) Define rate measures								X																
Distributed Generation & Distributed Energy Resources	Review DG Interconnection Laid Rule 141, as modified May 2008, for transparency, efficiency, and opportunities for program improvement. Specify the interconnection study requirements for each general type of DG, the time required, and the utility process and time for mitigating grid issues.								X																
	Develop modifications, if necessary, to Rule 141.									X															
	Utility and third-party Licensed Solar Sites										X														
Facilitate Development of Solar Generation	Complete studies of utility properties such for use as PV and/or CSP sites						X																		
Revised Air Conditioning	PUC approval of higher customer rebates completed						X																		
PEAK REDUCTION/PEAK SHIFTING																									
Demand Response Program	1) Implement HECO Residential Dynamic Pricing Pilot program, first April 2008, pending PUC approval						X																		
	2) Customer portal (aka feedback) proposed part of AMR system application						X																		
	3) File HECO DR/CUC and DR/CUC program materials, including aggregator part of action							X																	
	4) File HECO DR/CUC program aggregator pilot								X																
	5) File recommendations for demand response to address frequency fluctuations from intermittent RE									X															
	6) Evaluate DR/CUC program, determine schedule to apply as option to all HECO residential, consider application to C&I customers as option										X														
Residential TOU Rates	1) Implement residential on-peak block rates to HECO 2008, HECO 2007, and HECO 2006 rate cases, pending PUC approval						X																		
	2) Implement aggressive residential TOU optional rates in HECO 2008 rate case, first July 2008, pending PUC approval										X														
	3) File PHEV rate application, that encourages off-peak vehicle charging, to coincide with commercialization of PHEVs.																								
Commercial TOU Rates	1) Apply existing optional TOU rates to C&I customers with AMR meters on opt-out basis (customers without AMR may opt-in to TOU)						X																		
	2) Initiate DRB study by TOU rate periods as basis for mandatory C&I TOU						X																		
	3) Complete DRB study and design mandatory C&I TOU rate										X														
	4) Evaluate load factor trends and implement flat rates for all C&I customers in HECO's 2008 rate case, first July 2008, pending PUC approval											X													
	5) Mandatory TOU rates to apply to all C&I customers with demand charges when C&I AMR deployment is complete																								
DECOUPLING	Decouple utility revenues								X																

HELCO TIMELINE

HAWAII ELECTRIC LIGHT COMPANY, INC. (HELCO)		The following milestones are agreed upon by the parties. Any deviation from the milestones will need to be justified by the party and parties involved.																											
		2008				2009				2010				2011				2012				2013							
ACTIVITIES & TASKS		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Renewable Energy Commitments																													
RENEWABLE GENERATION - PV Projects																													
PCV Construction	Complete term sheet				X																								
	Perform RPS/Negotiated PPA								X																				
	Commercial operation date (proposed by PVP)																X												
Renewable Biomass at 150 Hertz	Complete term sheet				X																								
	Perform RPS/Negotiated PPA								X																				
	Commercial operation date (proposed by PVP)																X												
Naval County Waste-To-Energy	County council for not approve project																												
Energy Meter	Perform RPS/Negotiated PPA				X																								
	Commercial operation date (proposed by PVP)					X																							
No Metered Wind and PSH	Complete term sheet								X																				
	Perform RPS/Negotiated PPA																X												
	Commercial operation date (proposed by PVP)																												
	Awaiting update by the Midland Wind Dec. 1, 2008. No update received.																												
ENERGY EFFICIENCY/CUSTOMER BYED GENERATION																													
PV	Request opening of feed-in tariff device							X																					
Mandatory Solar Roofing, SB654	Revisions to address SB644 issues					X																							
Pay-As-You-Save Solar Program	Application to support program to 2,000 systems (estimated)					X																							
PV Hook Program	Submit Program application for PUC approval							X																					
Net Energy Metering	File application with PUC to replace current C&I with small cap								X																				
	Review OJ interconnection with Rule 141, as modified May 2008, for requirements, efficiency, and opportunities for process improvement. Specify the interconnection study requirements for each general type of DG, the time required, and the utility process and time for mitigating grid issues.							X																					
	Develop interconnection, if necessary, to Rule 141.											X																	
	Develop and complete a Localized Value Map											X																	
	Complete review of utility properties for use as PV and/or CSP sites							X																					
Facilitate Development of Solar Generation																													
PEAK REDUCTION/PEAK SHIFTING																													
Demand Response Program & Load Management	1) File HELCO load management programs with appropriate plan of action							X																					
	2) File recommendations for demand response to address frequency fluctuations from intermittent RE											X																	
	3) Evaluate RPS program, determine schedule to apply as option to all HELCO residential (contingent upon full scale installation of AMI meters and communication system. Consider application to C&I customers as option												X																
Residential TOU Rates	1) Implement residential locked block and TOU rates in HELCO 2008 rate case, pending PUC approval							X																					
	2) Implement aggressive residential TOU optional rates in HELCO 2008 rate case																												
	3) File PHEV rate application, that encourages off peak vehicle charging, to coincide with commercialization of PHEVs																												
Commercial TOU Rates	1) Apply C&I TOU rates proposed in HELCO 2008 rate case on an interim basis to C&I customers selecting AMI meters, on opt-out basis (customers without AMI may opt-in to TOU)							X																					
	2) Eliminate load factor discounts and implement flat rates for all C&I customers in HELCO 2008 rate case																												
	3) Mandatory TOU rates to apply to all C&I customers with demand charges when C&I AMI deployment is complete																												
DECOUPLING	Decouple utility revenues, timing contingent on filing date of 2008 HELCO rate case																												

MAUI ELECTRIC COMPANY, LTD (MECO)

[illegible]

Existing renewable IPP contracts with energy charge tied to oil prices

Name	Prime Mover [Primary Fuel]	Contract Effective Term [Term Years]
<u>Hawaiian Electric Company, Inc.</u>		
H-POWER	Steam Turbine [Mun Waste]	Mar 31, 1986 (Jun 30, 1992 for FCA) to Jul 31, 2015 or at least 52 months' advance notice to terminate [25]
<u>Hawali Electric Light Company, Inc.</u>		
Puna Geothermal Ventures	Geothermal Turbine (ten 3 MW) [Geothermal]	Mar 25, 1986 (Feb 14, 1990 for FCA) to at least Dec 31, 2027 [minimum 35]
Hawi Renewable Development, Inc. [HRD]	Wind Turbine [Wind] (sixteen .660 MW)	May 19, 2006 to at least May 18, 2021 (minimum 15)
Tawhiri Power LLC (wholly owned subsidiary of Apollo Energy Corporation)	Wind Turbine (fourteen 1.5 MW: Group A (8,6,4,1,3)–7.5 MW; Group B (13,12,7,5,2, 14,11,10,9)–13.5 MW) [Wind]	Apr 3, 2007 to at least Apr 2, 2027 [minimum 20]
Wailuku River Hydroelectric Limited Partnership	Hydro Turbine (two 5 MW) [Water]	Mar 6, 1991 to May 12, 2023 [30]
<u>Maul Electric Company, Ltd.</u>		
Hawaiian Commercial & Sugar [HC&S] (a division of Alexander and Baldwin)	Steam Turbine 5 steam (TG3 10, TG4 18, TG5 16, TG1 10, TG2 2) and 3 hydro (Kaheka 4.5, Paia 0.9, Hamakua 0.6) [Bagasse]	Nov 30, 1990 to at least Dec 31, 2014
Kaheawa Wind Power, LLC –Owner; UPC Wind Management, LLC –Operator; Kaheawa Wind Farm –Facility	Wind Turbine (twenty 1.5 MW) [Wind]	Jun 9, 2006 to at least Jun 8, 2026 [minimum 20]
Makila Hydro, LLC	Hydro Turbine [Water]	Sep 22, 2006 to at least Sep 21, 2026 [minimum 20]

Note:

Utility's filed short-term avoided energy cost and filed Schedule Q rate are tied to fossil fuel pri

Hawaiian Electric Company, Inc. • PO Box 2750 • Honolulu, HI 96840-0001



Darcy L. Endo-Omoto
Vice President
Government & Community Affairs

March 4, 2009

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PUBLIC UTILITIES
COMMISSION

The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
465 South King Street, First Floor
Kekuanaoa Building
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Hawaiian Electric 2009 Capital Expenditures Budget

In accordance with the provisions of paragraph 2.3(g)(1) of General Order No. 7, enclosed are nine copies of Hawaiian Electric Company, Inc.'s ("Hawaiian Electric") 2009 Capital Expenditures Budget.¹ Hawaiian Electric has included (1) a brief description of each project that is expected to cost \$1 million or more for the upcoming years and each program that is expected to cost \$1 million or more annually, and a statement as to the primary reasons for the project/program, (2) an explanation of how a project/program relates to the overall operational objectives of Hawaiian Electric, and is consistent with Hawaii Clean Energy Initiative and (3) the estimated start and completion dates for each project.² (The start date is the date that expenditures are first charged to construction work in progress ("CWIP") and generally when allowance for funds used during construction ("AFUDC") is first applied. Prior to when costs are charged to CWIP, costs are generally charged to and accumulated in preliminary engineering. The end date is the date the project is declared used or useful.)

Also enclosed are nine copies of Hawaiian Electric's schedule on Property Held for Future Use, in accordance with Decision and Order No. 6275 in Docket No. 3705.

The 2009 Capital Expenditures Budget lists projects with estimated expenditures of \$1 million or more in the upcoming years. The 2009-2013 Capital Expenditures Program is Hawaiian Electric's projection of its capital expenditure requirements for the next five years, as

¹ On December 15, 2008, Hawaiian Electric requested an extension to March 4, 2009, to file its Capital Expenditures Budget report. On December 19, 2008, the Commission issued a letter granting Hawaiian Electric's request.

² This information is being provided pursuant to Decision and Order No. 21002, filed May 27, 2004, in Docket No. 03-0257. In addition, Hawaiian Electric has provided an explanation of how a project/program is consistent with the Hawaii Clean Energy Initiative instead of its IRP due to the closing of Hawaiian Electric's IRP-4 process, and its proposed replacement with a Clean Energy Scenario Planning process.

The Hawaii Public Utilities Commission
March 4, 2009
Page 2

of December 2008, and is subject to revision based on customer needs and Hawaiian Electric's continual analysis of system requirements and costs. A supplemental list of projects with estimated expenditures of \$1 million or more in the upcoming years is also enclosed.

Also included are graphs comparing the one-year budget and five-year program to previous years.

Sincerely,

A handwritten signature in black ink, appearing to be "C. J. [unclear]", written over a horizontal line.

Enclosures

c: Division of Consumer Advocacy w/enclosures (2)



Hawaiian Electric Company, Inc.

**2009
Capital Expenditures Budget**

January 26, 2009

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

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**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Millions)

	Budget		
	Year 2009	2010 - 2013	Total
<u>Summary</u>			
Energy Delivery	95	491	586
Energy Projects	2	124	126
Power Supply	105	278	383
Other	5	25	30
<hr/>			
Total Capital Expenditures	207	918	1,125

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)							
	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
List of Projects							
Energy Delivery							
East Oahu Transmission Project							
Install various underground 46kV circuits in the Honolulu area. In addition, install 138kV to 46kV transformers at Kamoku and Archer Substations, and make minor modifications at various distribution substations in the Honolulu area. The project is needed to address various transmission system problems in east Oahu. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jul-91	***	38,126	13,120	22,838	0	74,084
Rail Transit							
Install multiple 46-12kV 10/12.5 MVA transformers at existing HECO substations to serve facilities for the Honolulu High Capacity Transit Station. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-11	Dec-18	0	0	24,080	44,405	68,485
Advanced Metering Infrastructure							
Deploy the infrastructure and back-office application that will serve as the foundation for enabling a suite of utility applications intended to provide operational reliability and enhanced customer service benefits. The project supports HECO's strategies related to Achieve a Preferred Energy Future and related to improving Customer Partnerships and Hawaii Clean Energy Initiative.	Jan-10	Dec-12	0	0	39,855	1,743	41,598

***Phase 1 = June 2010
Phase 2 = being evaluated

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start</u> <u>Date</u>	<u>End</u> <u>Date</u>	<u>Prior</u> <u>Years</u>	<u>Budget</u> <u>Year</u> <u>2009</u>	<u>2010 -</u> <u>2013</u>	<u>Future</u> <u>Years</u>	<u>Total</u>
Kahe-Permanente 46kV Underground Conversion							
Convert existing electrical lines to underground 46kV and 12kV electrical lines on Farrington Highway between Black Rock and Hakimo Road. The project supports HECO's strategies related to Community Commitment.	Feb-09	Dec-13	0	2,566	38,573	689	41,828
Mobile Radio Replacement							
To comply with FCC Order 03-34 which requires the reduction of existing telecommunications frequency bandwidth by half prior to January 1, 2013. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Mar-09	Dec-12	18	1,075	33,215	0	34,308
Hahaione Subdivision Cable Replacement							
Replace direct buried cables in the Hahaione area. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-11	Nov-15	0	0	2,277	20,802	23,079
UH West Oahu Substation							
Build a substation to serve the loads generated by the proposed University of Hawaii West Oahu (UHWO) campus and other new proposed developments in the area. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Oct-07	Jul-11	305	2,609	14,017	0	16,931
Kapolei Substation							
Develop substation adequate for four 46-12kV, 10/12.5 MVA transformers to provide power to the upcoming new loads for the proposed East Kapolei II subdivision and the proposed Kapolei Mall. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jul-09	Sep-12	0	0	7,810	0	7,810

Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Pukele Transformer #2 Replacement							
Replace Pukele Substation 48/80MVA transformer #2 to mitigate extended outages due to transmission failure. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Feb-12	Jan-15	0	0	62	7,633	7,695
Ewa Nui Transformer B Install							
Provide additional transmission capacity to serve upcoming new loads in the surrounding area such as UH West Oahu. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Oct-09	Apr-12	64	100	5,658	0	5,822
Whitmore Substation							
Build a substation in the Wahiawa area to serve the new load for the Hawaii Regional Security Operations Center. The project supports HECO's strategies related to Customer Partnerships.	Aug-07	Jul-11	469	2,189	2,666	0	5,324
Pukele Transformer Replacement							
Replace transformer in Pukele Substation. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Aug-07	Feb-12	14	52	4,868	0	4,934
Whitmore Substation for NCTAMS							
Install 46kV feeder extension to the Whitmore Substation from the existing Wahiawa-Waialua #2 46kV circuit to provide additional load to the Naval Computer and Telecommunications Area Master Station Pacific (NCTAMS Pac) located in Kunia, Oahu. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Sep-08	Feb-10	119	2,449	2,096	0	4,664

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Halawa 2 Transformer Replacement							
Replace Halawa #2 138-46kV, 80MVA transmission substation transformer. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Oct-09	Dec-13	0	7	4,191	0	4,198
Kahe #1 50MVA Transformer Replacement							
Purchase one 138-46KV 80MVA transmission substation transformer to replace existing Kahe #1 138-46kV 50MVA transformer. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	May-13	Dec-15	0	0	1,043	3,017	4,060
Kahe-Halawa 138kV Shield Wire Replacement							
Replace the Kahe-Halawa #1 138kV transmission line shield wire and upgrade to an Optical Ground Wire (OPGW) to provide additional communication channel. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Feb-12	Nov-13	0	0	3,856	0	3,856
Halawa 1 Transformer Replacement							
Replace Halawa #1 138-46kV, 80MVA transmission substation. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Oct-09	Dec-11	0	14	3,768	0	3,782

Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009

(\$ in Thousands)

	<u>Start</u>	<u>End</u>	<u>Prior</u>	<u>Budget</u>	<u>2010 -</u>	<u>Future</u>	<u>Total</u>
	<u>Date</u>	<u>Date</u>	<u>Years</u>	<u>Year</u>	<u>2013</u>	<u>Years</u>	
				<u>2009</u>			
Kahe-Halawa #2 138kV Shield Wire Replacement							
Replace the Kahe-Halawa #2 138kV transmission line shield wire and upgrade to an Optical Ground Wire (OPGW) to provide additional communication channel. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-11	Jun-13	0	0	3,381	0	3,381
Kahe-Waiiau 138kV Shield Wire Replacement							
Replace the Kahe-Waiiau 138kV transmission line shield wire. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Feb-12	Nov-13	0	0	3,261	0	3,261
Kahe-Wahiawa 138kV Shield Wire Replacement							
Replace the Kahe-Wahiawa 138kV transmission line shield wire and upgrade to an Optical Ground Wire (OPGW) to provide additional communication channel. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-10	Jun-12	0	0	3,238	0	3,238
Waiiau-Koolau #1 Shield Wire Replacement							
Replace the Waiiau-Koolau 138kV transmission line shield wire and upgrade to an Optical Ground Wire (OPGW) to provide additional communication channel. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Apr-09	Sep-11	0	15	3,108	0	3,123

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start Date</u>	<u>End Date</u>	<u>Prior Years</u>	<u>Budget Year 2009</u>	<u>2010 - 2013</u>	<u>Future Years</u>	<u>Total</u>
Kamokila Transformer #3							
Install a new 46/12kV unit substation (transformer and switchgear) and re-circuit a 12kV at the Kamokila Substation to relieve existing and projected overload conditions in the Kapolei area. The project will increase capacity and also improve system reliability. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Apr-08	May-09	1,599	1,104	0	0	2,703
Waiau-Wahiawa Shield Wire Replacement							
Replace the Waiau-Wahiawa 138kV transmission line shield wire and upgrade to an Optical Ground Wire (OPGW) to provide additional communication channel. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-10	Jun-12	0	0	2,597	0	2,597
Ala Wai Canal 46kV Underground Relocation							
Relocate the Pukele 4 and Pukele 5 46kV feeders crossing the Ala Wai Canal to a depth that will not interfere with future canal dredging activity to increase and maintain the reliability of the Waikiki Substation. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-08	Jul-10	0	458	2,107	0	2,565
Waikiki Rehabilitation Phase 2							
Replace existing deteriorated cables with covered polyethylene insulated concentric neutral cables. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-11	Dec-12	0	0	2,489	0	2,489
Barbers Point Tank Farm Transformer							
Install a new transformer at the Barbers Point Tank Farm. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Nov-07	Apr-09	1,655	570	0	0	2,225

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start Date</u>	<u>End Date</u>	<u>Prior Years</u>	<u>Budget Year 2009</u>	<u>2010 - 2013</u>	<u>Future Years</u>	<u>Total</u>
Aina Haina Cable Replacement Replace direct buried cables in the Aina Haina area. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-10	Oct-11	0	0	2,179	0	2,179
Kahe-Permanente 46kV Nanakuli Install 11 steel poles and one concrete pole to replace wood poles to meet National Electrical Safety Code 2002 wind loading criteria. The project supports HECO's strategies to Achieve a Preferred Energy Future.	Feb-08	Feb-09	909	1,086	0	0	1,995
Mikilua Substation Transformer #3 T&D Work Install new 10MVA 46-12kV transformer and associated 15kV switchgear at Mikilua Substation. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jul-07	Dec-09	134	2,097	96	0	2,327
Pukele Civil Structural Architectural Infrastructure Prepare Pukele Substation for possible future replacements of transformers. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Aug-07	Feb-11	185	145	1,597	0	1,927
Waikiki Rehabilitation Phase 3 Replace existing deteriorated cables with covered polyethylene insulated concentric neutral cables. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Nov-06	Oct-09	624	1,276	0	0	1,900
Iwilei T2 Replacement Replace the aging Iwilei T2 transformer and associated equipment. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Mar-10	Nov-10	0	0	1,899	0	1,899

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start Date</u>	<u>End Date</u>	<u>Prior Years</u>	<u>Budget Year 2009</u>	<u>2010 - 2013</u>	<u>Future Years</u>	<u>Total</u>
Maunalani Heights Cable Replacement Replace direct buried cables in the Maunalani Heights area. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	May-06	Dec-09	336	1,376	120	0	1,832
Iwilei T1 Replacement Replace the aging Iwilei T1 transformer and associated equipment. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jul-10	Mar-11	0	0	1,824	0	1,824
Waiau Ewa Nui Fiber Optic Replacement Replace the fiber optic strands between the Waiau Power Plant and the Ewa Nui Substation. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-06	Jun-09	802	778	0	0	1,580
Waiau-Koolau #2 Reconductor Replace existing Waiau-Koolau #2 138kV line between structures 59 & 61 to minimize the risk of losing Koolau and Pukele substations to allow for continual operation of the 138 kV transmission system and to maintain 46kV reliability. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-10	Dec-10	0	0	1,578	0	1,578
Ocean Pointe Transformer #2 Install a new 46/12kV unit substation (transformer and switchgear) and re-circuit a 12kV at the Ocean Pointe Substation to relieve existing and projected overload conditions in the Kapolei area. The project will increase capacity and also improve system reliability. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Apr-08	Aug-09	29	1,525	0	0	1,554

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start</u> <u>Date</u>	<u>End</u> <u>Date</u>	<u>Prior</u> <u>Years</u>	<u>Budget</u> <u>Year</u> <u>2009</u>	<u>2010 -</u> <u>2013</u>	<u>Future</u> <u>Years</u>	<u>Total</u>
Koolau-Pukele #1 Shield Wire Replacement							
Replace the Koolau-Pukele #1 138kV transmission line shield wire and upgrade to an Optical Ground Wire (OPGW) to provide additional communication channel. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Nov-10	Jul-11	0	0	1,496	0	1,496
Koolau-Pukele #2 Shield Wire Replacement							
Replace the Koolau-Pukele #2 138kV transmission line shield wire and upgrade to an Optical Ground Wire (OPGW) to provide additional communication channel. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Nov-10	Jul-11	0	0	1,423	0	1,423
2012 Spare 10% Transformer #1							
Purchase a spare 46-12kV, 10/12.5 MVA, 10% z distribution substation transformer to minimize prolonged outages. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-13	Jun-13	0	0	1,367	0	1,367
Iwilei 46kV Substation Control House Upgrade							
Upgrade obsolete relay and wiring in the Iwilei 46kV Control House. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jun-11	Mar-12	0	0	1,344	0	1,344
2012 Spare 8% Transformer #1							
Purchase a spare 46-12kV, 10/12.5 MVA, 8% z distribution substation transformer to minimize prolonged outages. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-13	Mar-13	0	0	1,282	0	1,282

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Halawa-School Shield Wire Replacement							
Replace the Halawa-School 138kV transmission line shield wire and upgrade to an Optical Ground Wire (OPGW) to provide additional communication channel. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Nov-08	Aug-09	32	1,219	0	0	1,251
Waiau-Koolau #1 Structure 55/56							
Replace existing aluminum A-Frame ridge structure, Waiau-Koolau #1 Structure 55/56 with a new galvanized tubular steel H-Frame structure to meet the 100 mph wind speed standard. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Apr-09	Aug-10	0	450	748	0	1,198
Waiau-Koolau #2 Structure 59							
Replace existing aluminum A-Frame ridge structure, Waiau-Koolau #2 Structure 59 with a new galvanized tubular steel H-Frame structure to meet the 100 mph wind speed standard. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jun-09	Dec-10	0	450	748	0	1,198
2011 Spare 10% Transformer #1							
Purchase a spare 46-12kV, 10/12.5 MVA, 10% z distribution substation transformer to minimize prolonged outages. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Aug-11	Jun-12	0	0	1,179	0	1,179

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start</u> <u>Date</u>	<u>End</u> <u>Date</u>	<u>Prior</u> <u>Years</u>	<u>Budget</u> <u>Year</u> <u>2009</u>	<u>2010 -</u> <u>2013</u>	<u>Future</u> <u>Years</u>	<u>Total</u>
2011 Spare 8% Transformer #1							
Purchase a spare 46-12kV, 10/12.5 MVA, 8% z distribution substation transformer to minimize prolonged outages. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	May-11	Mar-12	0	0	1,106	0	1,106
Makakilo C&D Ph1 46kV UG							
Install underground line to replace existing portion of overhead lines at the proposed Makakilo C&D Phase 1 residential subdivision for the construction of a new access road. The project supports HECO's strategies related to Community Commitment.	Mar-08	Nov-08	481	587	0	0	1,068
2010 Spare 10% Transformer #1							
Purchase a spare 46-12kV, 10/12.5 MVA, 10% z distribution substation transformer to minimize prolonged outages. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Aug-10	Jun-11	0	0	1,011	0	1,011
Miscellaneous Underground Service & Extensions							
Provide underground service to new and existing customers. The program supports HECO's strategies related to Achieve a Preferred Energy Future.		on-going program		10,818	37,631		48,449
Transformer and Equipment Purchase/Service							
Purchase and provide overhead and padmount distribution transformers. The program supports HECO's strategies related to Achieve a Preferred Energy Future.		on-going program		5,555	29,065		34,620
Corrective Miscellaneous Cable Replacement							
Corrective replacement of underground primary, secondary, service and transmission cables. The program supports HECO's strategies related to Achieve a Preferred Energy Future.		on-going program		6,374	27,133		33,507

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Preventive Miscellaneous Cable Failure Replacement							
Planned replacement of direct buried primary and secondary cables before failure. The program supports HECO's strategies related to Achieve a Preferred Energy Future.		on-going program		4,215	21,483		25,698
Preventive Overhead Distribution Replacement							
Planned replacement of overhead distribution poles, conductors and fixtures due to leaning, rotten or termite eaten poles and equipment identified through inspections. The program supports HECO's strategies related to Achieve a Preferred Energy Future.		on-going program		3,152	18,203		21,355
Corrective Overhead Distribution Replacement							
Corrective replacement of overhead poles, fixtures, and aerial cables that have been identified as broken, rusted, corroded, rotten or damaged. The program supports HECO's strategies related to Achieve a Preferred Energy Future.		on-going program		2,824	12,123		14,947
Preventive Overhead Subtransmission Replacement							
Planned replacement of overhead subtransmission poles, conductors and fixtures due to leaning, rotten or termite eaten poles and equipment identified through inspections. The program supports HECO's strategies related to Achieve a Preferred Energy Future.		on-going program		1,880	12,237		14,117
Miscellaneous Overhead Service and Extensions							
Provide overhead service to new and existing customers. The program supports HECO's strategies related to Achieve a Preferred Energy Future.		on-going program		1,203	4,269		5,472

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Minor Overhead Distribution Additions							
Replacement of overhead distribution poles due to rot and termite damage. Reconductor and construct various 12 & 4kV lines and minor distribution system voltage adjustments. The program supports HECO's strategies related to Achieve a Preferred Energy Future.	on-going program			1,117	3,760		4,877
Meters and Metering Equipment							
Purchase, test and install meters, solid state recorders and associated equipment, instrument transformers, phase shifting transformers, test blocks and wire. The program supports HECO's strategies related to Achieve a Preferred Energy Future.	on-going program			841	3,453		4,294
AMI Meter Program							
Purchase, install and test revenue AMI meters and associated AMI metering equipment including instrument transformers, test blocks and wires. The program supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	on-going program			55	2,136		2,191
Sub-Total				75,351	423,544		
Other Projects and Programs							
Includes projects with total expenditures of less than \$1,000,000 and programs with annual expenditures of less than \$1,000,000.				19,343	67,011		
Total Energy Delivery				94,694	490,555		

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start Date</u>	<u>End Date</u>	<u>Prior Years</u>	<u>Budget Year 2009</u>	<u>2010 - 2013</u>	<u>Future Years</u>	<u>Total</u>
Energy Projects							
2014 New Generations							
Develop and build a non-grid connected, firm capacity, renewable energy generator of nominal 50MW size. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-10	Nov-14	0	0	112,057	59,068	171,125
Department of Transportation Airport Dispatchable Standby Generation							
Install paralleling equipment to allow utility dispatch of customer-owned generators at the Honolulu Airport. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Nov-08	Jul-10	560	1,163	3,096	0	4,819
2013 Distributed Generation							
Install new distributed generation to improve system reliability during times of peak demand. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-13	Dec-13	0	0	3,124	0	3,124
2012 Distributed Generation							
Install paralleling equipment to allow utility dispatch of customer-owned generators at a site to be determined. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-12	Dec-12	0	0	3,046	0	3,046
2011 Distributed Generation							
Install paralleling equipment to allow utility dispatch of customer-owned generators at a site to be determined. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-11	Dec-11	0	0	2,999	0	2,999

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget		2010 - 2013	Future Years	Total
				Year 2009				
Airport Dist Feeders 2b & 3B								
Install two new feeders on a diverse route to improve the reliability of power service to the airport main terminal. The State Department of Transportation Airports Division will provide 100% of the required funding of this project as CIAC. The project supports HECO's strategies related to Customer Partnerships.	Mar-09	Dec-09	215	1,321		0	0	1,536
Sub-Total				2,484		124,322		
Other Projects and Programs								
Includes projects with total expenditures of less than \$1,000,000 and programs with annual expenditures of less than \$1,000,000.				13		1		
Total Energy Projects				2,497		124,323		

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Power Supply							
Campbell Industrial Park Generating Station and Transmission Line							
Construct a nominal 100MW simple cycle combustion turbine unit at HECO's Barbers Point Tank Farm and install a transmission line from the AES Substation to the CEIP substation to maintain system reliability and prevent existing transmission line overloads. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jun-04	Jul-09	98,986	64,884	50	0	163,920
Parallel Plan Unit and Substation							
Construct a nominal 100MW simple cycle combustion turbine unit at HECO's Barbers Point Tank Farm and install associated substation equipment at AES Substation to meet forecasted load growth in accordance with the Competitive Bidding framework. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-08	Dec-12	88	1,126	129,685	0	130,899
Kahe Reverse Osmosis Water Pipeline							
Construct a pipeline to convey reverse osmosis water from the Board of Water Supply water treatment facility at Honouliuli to Kahe. This project is part of the community benefits package related to the CIP Generating Station and Transmission Line project. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jul-06	Sep-09	1,714	5,867	0	0	7,581

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Kahe 1 & 2 Biofuel Co-Firing							
Provide Kahe 1 & 2 the capability to fire various blends of biofuel and residual fuel oil to determine the maximum amount of biofuel that can be fired with residual fuel oil without major equipment modifications or capacity derates. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-10	Dec-12	0	0	5,891	0	5,891
Kahe Unit 1 Condenser Refurbishment							
Replace deteriorated tubes and tubesheets in condenser. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Nov-04	Oct-13	80	7	5,494	0	5,581
Kahe 5 & 6 Biofuel Co-Firing							
Provide Kahe 5 & 6 the capability to fire various blends of biofuel and residual fuel oil to determine the maximum amount of biofuel that can be fired with residual fuel oil without major equipment modifications or capacity derates. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-11	Dec-13	0	0	5,339	0	5,339
Kahe 4 Biofuel Co-Firing							
Provide Kahe 4 the capability to fire various blends of biofuel and residual fuel oil to determine the maximum amount of biofuel that can be fired with residual fuel oil without major equipment modifications or capacity derates. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-10	Dec-11	0	0	5,099	0	5,099

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start Date</u>	<u>End Date</u>	<u>Prior Years</u>	<u>Budget Year 2009</u>	<u>2010 - 2013</u>	<u>Future Years</u>	<u>Total</u>
Kahe 3 Boiler Control Upgrade Replace the obsolete boiler control system with a microprocessor-based system. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Mar-03	Sep-07	4,284	13	0	0	4,297
Waiau Unit 7 Boiler Controls Upgrade Replace the obsolete boiler control system with a microprocessor-based system. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Oct-04	Jul-11	63	191	4,028	0	4,282
Waiau Unit 8 Boiler Controls Upgrade Replace the obsolete boiler control system with a microprocessor-based system. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-08	Aug-10	177	746	3,355	0	4,278
Barbers Point Fuel Oil Tank 131 Floor Renovation Renovate the bottom of Barbers Point Fuel Oil Tank 131. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Nov-07	Apr-09	2,435	1,825	0	0	4,260
Barbers Point Tank 132 Improvement Replace the existing roof insulation system and install a tank mixer to enhance blending capability. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Dec-11	Nov-12	0	0	4,132	0	4,132
Barbers Point Tank 133 Improvement Replace the existing roof insulation system and install a tank mixer to enhance blending capability. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Dec-10	Dec-11	0	3,094	784	0	3,878

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Kahe 3 Biofuel Co-Firing							
Provide Kahe 3 the capability to fire various blends of biofuel and residual fuel oil to determine the maximum amount of biofuel that can be fired with residual fuel oil without major equipment modifications or capacity derates. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Hawaii Clean Energy Initiative.	Jan-09	Oct-09	0	2,397	0	0	2,397
Waiau Unit 7 Main Transformer Replacement							
Replace deteriorated transformer. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Oct-06	Jul-08	2,270	11	0	0	2,281
Kahe Discharge Structure Reinforcement							
Retrofit and strengthen the existing Kahe cooling water discharge structure to withstand waves larger than those considered in the original design. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Oct-04	Dec-12	607	0	1,508	0	2,115
Waiau Unit 8 Main Transformer Replacement							
Replace deteriorated transformer. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Aug-08	Aug-10	11	605	1,450	0	2,066
Kahe Unit 4 Secondary Superheater Element Replacement							
Replace the secondary superheater section of the boiler. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jun-09	Nov-10	0	7	2,010	0	2,017

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Honolulu 8 Controls Upgrade							
Incorporate the remaining pneumatic controls into the Distributed Control System (DCS) to fully utilize the microprocessor technology. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Apr-10	Feb-13	0	0	2,000	2	2,002
Waiau Unit 9 Inlet Air Filter							
Replace the existing air intake and structure with a new filter house structure. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	May-06	Aug-12	62	5	1,739	0	1,806
Waiau Waste Water Treatment Facility Chemical Feed Upgrades							
Redesign and replace the existing Waiau wastewater treatment facility (WWTF) to provide safe and reliable operation of the chemical feed portion of the Waiau WWTF. The project supports HECO's strategies related to Achieve a Preferred Energy Future and related to Community Commitment.	Feb-07	Aug-09	463	1,310	0	0	1,773
Waiau Unit 10 Inlet Air Filter							
Replace the existing air intake and structure with a new filter house structure. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jun-06	Nov-09	106	1,568	0	0	1,674

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start Date</u>	<u>End Date</u>	<u>Prior Years</u>	<u>Budget Year 2009</u>	<u>2010 - 2013</u>	<u>Future Years</u>	<u>Total</u>
Waiau Waste Water Treatment Facility Filter Press							
Install a plate filter press for the Waiau Waste Water Treatment Facility near the batch tanks. The project supports HECO's strategies related to Achieve a Preferred Energy Future and Community Commitment.	Nov-07	Aug-09	336	1,313	0	0	1,649
Kahe Fire Water Tank 2							
Install second firewater tank near the wastewater ponds at the Kahe Power Plant to comply with Board of Water Supply and Fire Department requirement for industrial site fire flow. The project supports HECO's strategies related to Community Commitment.	May-03	Jun-09	155	1,482	0	0	1,637
Waiau 5 Main Condenser Refurbish							
Refurbish and upgrade major components of the Waiau 5 condenser to mitigate the problem of sea water ingress into the condensate system. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	May-10	Nov-11	0	0	1,623	0	1,623
Kahe Unit 6 Turbine Controls Upgrade							
Replace the obsolete turbine control system with a microprocessor-based system. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Feb-12	Aug-13	0	0	1,576	0	1,576
Waiau Unit 6 Main Condenser Refurbishment							
Replace the deteriorated tubesheet and tubes in the condenser. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jun-08	Feb-10	16	983	554	0	1,553
Kahe Unit 5 Turbine Controls Upgrade							
Replace the obsolete turbine control system with a microprocessor-based system. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Oct-08	Mar-12	1	0	1,548	0	1,549

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Kahe Unit 4 Turbine Controls Upgrade							
Replace the obsolete turbine control system with a microprocessor-based system. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Feb-09	Dec-10	0	85	1,431	0	1,516
Kahe Unit 2 Excitation System							
Replace the existing rotation exciter and mag-amp voltage regulator with a compound-source static excitation system. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jun-07	Jun-09	281	1,211	1	0	1,493
Waiau Pond Sheetpiling							
Replace approximately 500 linear feet of wood pole piles with new steel sheet piles. The project supports HECO's strategies related to Community Commitment.	Jan-06	Dec-10	308	0	1,136	0	1,444
Honolulu Unit 8 Voltage Regulator/Exciter Replacement							
Replace exciter and voltage regulator with a new microprocessor based compound-source static exciter and voltage regulator. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Sep-07	Jun-08	1,288	10	0	0	1,298
Waiau Unit 6 Voltage Regulator/Exciter Replacement							
Replace exciter and voltage regulator with a new microprocessor-based compound-source static exciter and voltage regulator. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-09	Feb-10	0	1,177	100	0	1,277

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start</u> <u>Date</u>	<u>End</u> <u>Date</u>	<u>Prior</u> <u>Years</u>	<u>Budget</u> <u>Year</u> <u>2009</u>	<u>2010 -</u> <u>2013</u>	<u>Future</u> <u>Years</u>	<u>Total</u>
Kahe 6 Annunciator Replacement							
Replace the existing Kahe 6 annunciator system with a new ABB S800 remote I/O and Ronan system with LED bulbs driven by a redundant modbus interface from the DCS. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Nov-04	Mar-09	869	405	0	0	1,274
Honolulu 8 Motor Control Center & Wire Replacement							
Replace Honolulu Unit #8 motor control center and all low voltage power, alarm and control wiring within the unit maintain the unit's ability to operate effectively. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jun-12	Feb-13	0	0	1,248	0	1,248
Honolulu 9 Motor Control Center & Wire Replacement							
Replace Honolulu Unit #9 motor control center and all low voltage power, alarm and control wiring within the unit maintain the unit's ability to operate effectively. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Aug-10	Apr-11	0	0	1,218	0	1,218
Kahe Wastewater Treatment Facility Sludge Drying Improvement							
Install a system to dry the sludge at Kahe Power Plant. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jun-10	Dec-11	0	0	1,181	1	1,182
Honolulu Unit 8 Secondary Superheater Element Replacement							
Replace the secondary superheater section of the boiler. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Dec-11	Feb-13	0	0	1,132	0	1,132

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Waiau 7 Voltage Regulator/Exciter Replacement							
Replace exciter and voltage regulator with a new microprocessor-based compound-source static exciter and voltage regulator. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-10	Jul-11	0	0	1,096	0	1,096
Waiau 7 Feedwater Heater #75 Replacement							
Replace Waiau Unit #7 feedwater heater #75 to maintain the efficiency and reliable operation. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Mar-06	Mar-09	848	215	0	0	1,063
Waiau Unit 5 Voltage Regulator/Exciter Replacement							
Replace exciter and voltage regulator with a new microprocessor-based compound-source static exciter and voltage regulator. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jun-07	Nov-11	110	0	940	0	1,050
Honolulu 8 Boiler Electrical Warming System							
Retrofit the Honolulu Unit 8 boiler with an electric warming system that will keep the boiler at a constant temperature by minimizing firing of the unit to maintain steam pressures and temperatures and by reducing thermal cycles on thick-walled boiler components. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Dec-00	Mar-09	995	48	0	0	1,043
Kahe 5 Annunciator Replacement							
Replace the existing Kahe 5 annunciator system with a new ABB S800 remote I/O and Ronan system with LED bulbs driven by a redundant modbus interface from the DCS. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Mar-08	Jan-09	1,002	39	0	0	1,041

Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009

(\$ in Thousands)

	Start Date	End Date	Prior Years	Budget Year 2009	2010 - 2013	Future Years	Total
Emergency Power Plant Additions							
Miscellaneous power plant additions, each under \$100,000, either purchased or installed for the Honolulu, Waiau or Kahe Station. The program supports HECO's strategies related to Achieve a Preferred Energy Future.	on-going program			2,474	10,898		13,372
Sub-Total				93,098	198,246		
Other Projects and Programs							
Includes projects with total expenditures of less than \$1,000,000 and programs with annual expenditures of less than \$1,000,000.				11,852	79,559		
Total Power Supply				104,950	277,805		

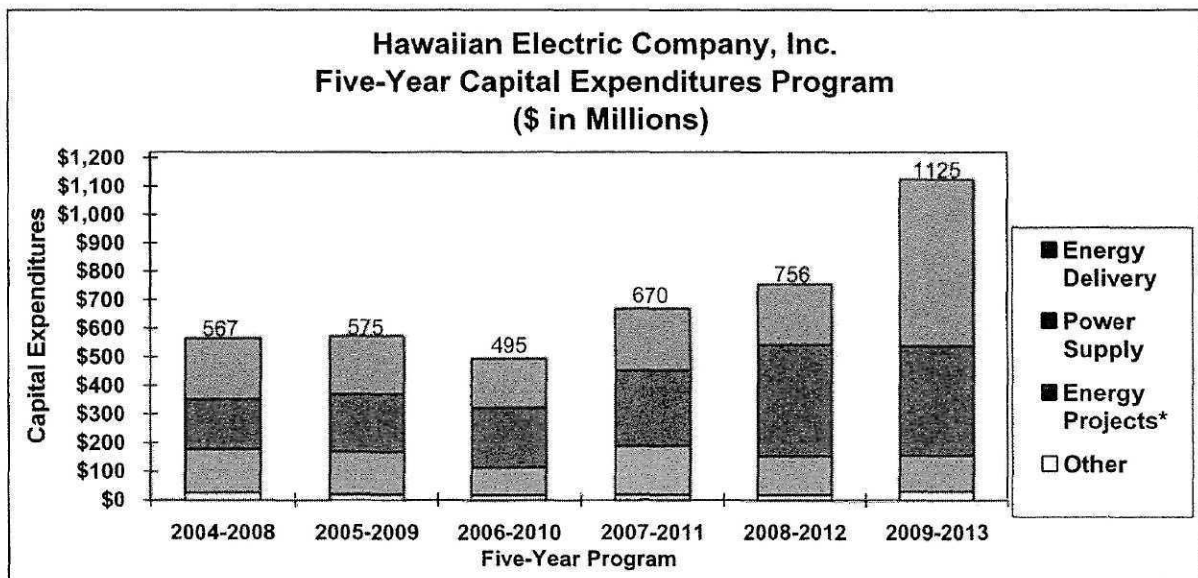
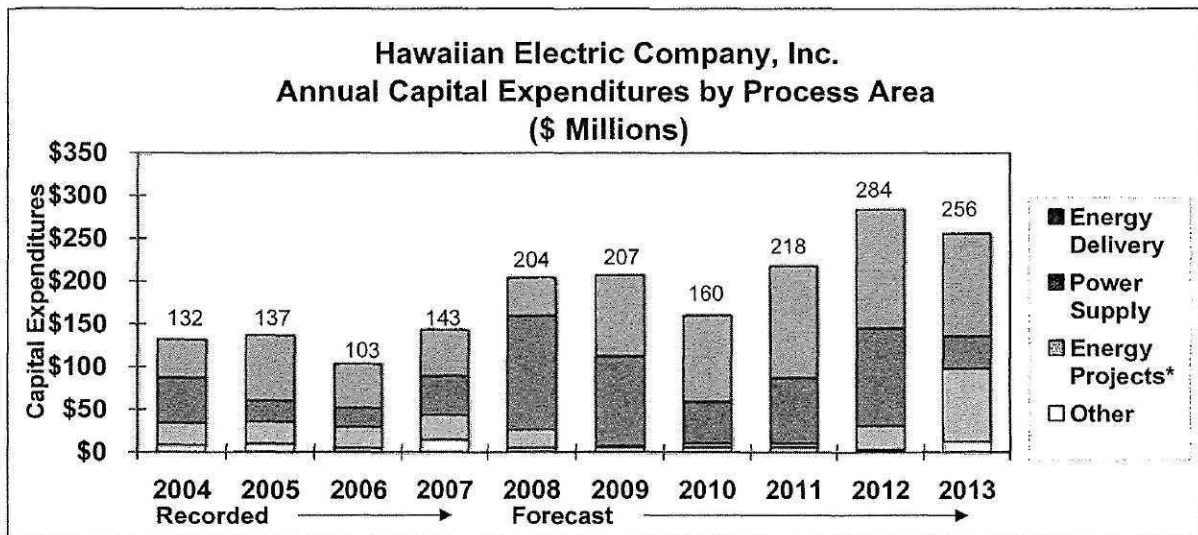
**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

(\$ in Thousands)

	<u>Start Date</u>	<u>End Date</u>	<u>Prior Years</u>	<u>Budget Year 2009</u>	<u>2010 - 2013</u>	<u>Future Years</u>	<u>Total</u>
Other							
Waiau Admin Offices							
Create additional office space to accommodate increased office staff. The project supports HECO's strategies related to Corporate Culture.	Jan-12	Dec-13	0	0	6,620	0	6,620
New Chemical Laboratory							
Construct a new facility to house the chemical, air and water laboratory operations to replace existing aging facilities. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Jan-12	Dec-13	0	0	3,511	0	3,511
PCs, Servers, & Network							
Purchase various hardwares to provide growth and life cycle replacements for network equipment, business and technical desktops and peripherals as requested by individual HECO departments. The program supports HECO's strategies to Achieve a Preferred Energy Future.	on-going program			1,424	5,616		7,040
Sub-Total				1,424	15,747		
Other Projects and Programs							
Includes projects with total expenditures of less than \$1,000,000 and programs with annual expenditures of less than \$1,000,000.				3,168	9,716		
Total Other				4,592	25,463		
TOTAL CAPITAL EXPENDITURES				206,733	918,146		

Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009

Graphs of Annual and Five-Year Capital Expenditures



*Prior to 2009, Energy Projects and Customer Installation (CI) were included with Energy Solutions. CI is now included in Energy Delivery.

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget
January 26, 2009**

Five-Year Summary

2009-2013 Capital Expenditures Program

(\$ in Millions)

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
Energy Delivery	95	101	131	139	120
Energy Projects	2	5	5	28	86
Power Supply	105	49	77	114	38
Other	5	5	5	3	12
Total Capital Expenditures	207	160	218	284	256

Totals may not add due to rounding

Total Capital Expenditures 2009-2013 Inclusive: \$1,125 million

General Notes:

This budget is based on the September 2008 Sales and Peak update, which was reevaluated in December 2008.

	<i>% increase (decrease)</i>				
	2009	2010	2011	2012	2013
Peak Demand	4.8	(2.3)	0.8	0.9	2.5
Sales	(1.1)	(0.3)	0.6	1.4	1.6


 Approved: Richard M. Rosenblum
 President and CEO

1-28-09
 Date

Hawaiian Electric Company, Inc.

2008
Property Held for Future Use

January 26, 2009

Hawaiian Electric Company, Inc.

Schedule of Property Held for Future Use - 2008

<u>Property Name</u>	<u>Tax Map Key</u>	<u>Acquisition Date</u>	<u>Purchase Price</u>	<u>Service Date</u>
Kalaeloa Barbers Point Harbor Pipeline	9-1-14:08	1991	\$517,276.59	---
Campbell Industrial Park Generating Station	9-1-26:38	2007	\$1,809,875.14	Post 2009
Kapolei Substation	9-1-16:90	2006	\$3,606.00	2012

Status of Property Held for Future Use

Kalaeloa-Barbers Point Harbor Pipeline

During the construction of the State's Kalaeloa-Barbers Point Harbor, HECO was provided the opportunity to install fuel pipeline and manifold equipment to establish the future capability of shipping fuel through this deep draft harbor should the need arise. Currently, this pipeline is not in use because HECO continues to receive and ship its fuels under contracts with Chevron and Tesoro.

Campbell Industrial Park Generating Station

The parcel is a 1.76 acre property between Hanua Street and HECO's existing AES Substation that will allow for expansion of the AES Substation to accommodate future additional capacity in Campbell Industrial Park. Construction of facilities will remain in Property Held for Future Use until future additional capacity is added in the Campbell Industrial Park area.

Kapolei Substation

This parcel was dedicated to HECO by the Housing and Community Development Corporation of Hawaii to provide electrical infrastructure for the Kapolei East area. HECO's purchase price was its site investigation and closing costs. Installation of a distribution substation is currently scheduled for 2012 to accommodate loads in the Kapolei East area, such as the proposed Kapolei Mall and Department of Hawaiian Home Land's residential developments.

Hawaiian Electric Company, Inc.

2009
Supplemental List of Projects

January 26, 2009

**Hawaiian Electric Company, Inc.
2009 Capital Expenditures Budget**

(\$ in Thousands)

	<u>Start Date</u>	<u>End Date</u>	<u>Prior Years</u>	<u>Budget Year 2009</u>	<u>2010 2013</u>	<u>Future Years</u>	<u>Total</u>
<u>Supplemental List of Projects</u>							
Spare 48/80MVA Transformer #2							
Purchase one 138-46kV, 48/80 MVA, transmission substation transformer. The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Dec-08	Nov-11	14	733	2,014	0	2,761
Kakakao Makai Department of Transportation Request							
Design and construct duct lines and electrical system to serve the Kakaako Makai area from Kamakee Street to Bethel Street along Ala Moana Boulevard and undergrounding existing overhead lines along Ala Moana Boulevard. between Queen Street to Cooke Street The project supports HECO's strategies related to Achieve a Preferred Energy Future.	Apr-03	Jul-11	423	324	10,856	0	11,603

Hawaiian Electric Company, Inc.

Description for Strategies

Descriptions for Strategies included in Capital Expenditures Budget

Strategy	Description
Achieve A Preferred Energy Future	<ul style="list-style-type: none">Our strategy is to meet our customers' growing demand for electricity through a mix of resources that include energy conservation and efficiency, renewables, distributed generation and central station powered by clean fuels. We will also continue to invest in projects that maintain or improve our system reliability.
Community Commitment	<ul style="list-style-type: none">Our strategy is to support our community, protect the environment, and positively engage the public on key company issues and projects.
Customer Partnerships	<ul style="list-style-type: none">Our strategy is to pursue new technologies, build strong relations, and provide excellent customer service in order to achieve high levels of customer satisfaction.
Corporate Culture	<ul style="list-style-type: none">Our strategy is to be an employer of choice, such that we can attract, develop and retain a dedicated and skilled workforce, led by a quality management team.

Hawaiian Electric Company, Inc.

Hawaii Clean Energy Initiative

HAWAII CLEAN ENERGY INITIATIVE

Decision and Order No. 21002, filed May 27, 2004, in Docket No. 03-0257 required, among other things, that the Hawaiian Electric Companies' capital improvement budget reports include a brief explanation of how the projects are consistent with the respective Integrated Resource Plans ("IRP") for each Company. In late-2008, the Commission closed the respective IRP proceedings for Hawaiian Electric Company, Inc. ("Hawaiian Electric"), Hawaii Electric Light Company, Inc., ("HELCO"), and Maui Electric Company, Limited ("MECO").¹ As a result, in the subsequent paragraphs, instead of providing a brief explanation of how the projects are consistent with the respective IRP's, the Companies are providing a brief explanation of how the projects are consistent with the Hawaii Clean Energy Initiative ("HCEI").

On January 28, 2008, the State of Hawaii and the U.S. Department of Energy signed a memorandum of understanding ("MOU") establishing the HCEI, which provided in part:

It is estimated that Hawaii can potentially meet between 60 and 70 percent of its future energy needs from clean, renewable energy sources. However, achieving this level market of penetration will require substantive transformation of the financial, regulatory, legal, and institutional systems that govern energy planning and delivery within the State.

As a result of the MOU, working groups were created to address, among other things: (1) the use of renewable energy at remote locations; (2) transmission and distribution improvements, grid management improvements, and energy storage to ensure that the existing and future infrastructure facilitates optimal use of renewable energy resources and readily adapts to and incorporates new developments in system planning and transmission technologies while

¹ By Order filed November 26, 2008 in Docket No. 2007-0084, the Commission closed Hawaiian Electric's IRP-4 proceeding. By Order filed November 26, 2008 in Docket No. 04-0046, the Commission closed HELCO's IRP-3 proceeding. By Order filed December 8, 2008 in Docket No. 04-0077, the Commission closed MECO's IRP-3 proceeding. The IRP process will be replaced by a new Clean Energy Scenario Planning ("CESP") process, and a new docket will be opened in 2009 to establish the CESP process.

maintaining system reliability; (3) the development of innovative public and private financing vehicles for alternative energy sources and clean energy technologies at the state and county levels; and (4) design and enactment of comprehensive regulatory mechanisms that provide appropriate incentives for all stakeholders in the energy supply chain to proactively transition to a renewable energy-based future.

On October 20, 2008, the Governor of the State of Hawaii, the Department of Business, Economic Development and Tourism, the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs, and the Hawaiian Electric Companies (collectively the "HCEI Parties") executed the Hawaii Clean Energy Initiative Agreement ("HCEI Agreement"), which documents a course of action to make Hawaii energy independent, and recognizes the need to maintain the Hawaiian Electric Companies' financial health in order to achieve that objective.

A product of the HCEI, the HCEI Agreement is a commitment on the part of the State and the Hawaiian Electric Companies to accelerate the addition of new, clean resources on all islands; to transition the Hawaiian Electric Companies away from a model that encourages increased electricity usage; and to provide measures to assist consumers in reducing their electricity bills. (See HCEI Agreement, pages 1-2.)

The HCEI Parties agreed in principle that the basic infrastructure of the current electrical system is a critical foundation to all other aspects of the HCEI. The HCEI Parties committed to support reasonable and prudent investment in the ongoing maintenance and upgrade of the existing generation, transmission, and distribution systems, unless the CESP process determines that specific investments previously identified as being needed are subsequently rendered unnecessary through the implementation of effective energy efficiency,

demand response, and distributed energy resources or non-utility generation. (See HCEI Agreement, Section 25, pages 30-31.)

Projects do not have to be included in an approved Clean Energy Scenario Plan to be consistent with the Plan. With a few exceptions, it is not expected that specific capital expenditure projects will be identified or discussed in a Clean Energy Scenario Plan. (The CESP process will provide a high level guidance on long-term [10-20 years] direction and an Action Plan for near-term initiatives [5 years], balancing how the utility will meet its customers' expected energy needs as modified by planned energy efficiency, renewables substitution and demand response, encouraging high levels of renewable and clean energy with distributed resources, while protecting reliability at reasonable costs.

For projects identified in the HCEI agreement

Projects that are specifically identified in the HCEI Agreement are reasonable in light of the HCEI and the State's movement towards self-sufficiency. These projects are specifically included in the HCEI Agreement as project proposals that are known today, with the goal of bringing the maximum number of projects and renewable MW on-line as quickly as possible subject to Commission approval, contract negotiations, and grid integration feasibility. This includes the Advanced Meter Infrastructure ("AMI") (Docket No. 2008-0303) and the Honolulu Airport biofueled Distributed Generation ("DG") (Docket No. 2008-0329) projects, for which capital expenditure applications were filed in 2008.

For projects NOT identified in the HCEI agreement

Projects that are not specifically identified in the HCEI Agreement are expected to be characterized as being reasonable in light of the HCEI and the State's movement towards self-sufficiency. In general, these projects will serve additional customer loads, provide for

customer growth, and/or increase system reliability. These projects are expected to be consistent with the future CESP process because they are a reasonable and prudent investment in the ongoing maintenance and upgrade of the existing generation, transmission and/or distribution system. (See Energy Agreement Section 25, Investment in the Infrastructure.) Maintaining and upgrading the electric system is essential to supporting reliable, renewable energy and to using technologies (such as advanced metering) that gives customers options for better managing energy use.

CA-IR-269

Ref: HECO Response to CA-IR-39, Attachment 1 (WP-101 Non Labor Alternate Sort Spreadsheet).

Please provide an update of this Attachment, substituting 2008 Recorded data in place of the Budget 2008 data previously provided.

HECO Response:

The information, submitted as Attachment 1, is being submitted under protective order as the October, November and December 2008 information is confidential until the information is publicly disclosed in the financial statements submitted to the Securities and Exchange Commission ("SEC"), which is scheduled for late February 2009. The information provided will not be considered final until the Company issues its financial statements to the SEC. Should any of the preliminary information change, the Company will provide the revisions as soon as practicable.

Attachment 1 is also voluminous and available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the document. An electronic copy of the requested information is being provided.

Attachment 1 contains confidential information and is provided subject to the Protective Order filed on November 21, 2008 in this proceeding. Attachment 1 is also voluminous and available for inspection at HECO's Regulatory Affairs Division office, Suite 1301, Central Pacific Plaza, 220 South King Street, Honolulu, Hawaii. Please contact Dean Matsuura at 543-4622 to make arrangements to inspect the document. An electronic copy of the requested information is being provided.